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CUBA

The Pearl of the Antilles

MAP OF CUBA, 12x24 Inches

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CUBA

The index letter and figure following the name refer to that point on the map at which lines, if drawn to connect the respective marginal letters upon either side and figures top and bottom of map, would cross each other at right angles.

Population figures are in accordance with Census of 1899. Railroad stations are indicated by *.

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Sibanicu G15
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Sierra D1
Sierra Morena D9
Siguaguas..* ..C8
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Sitio I19
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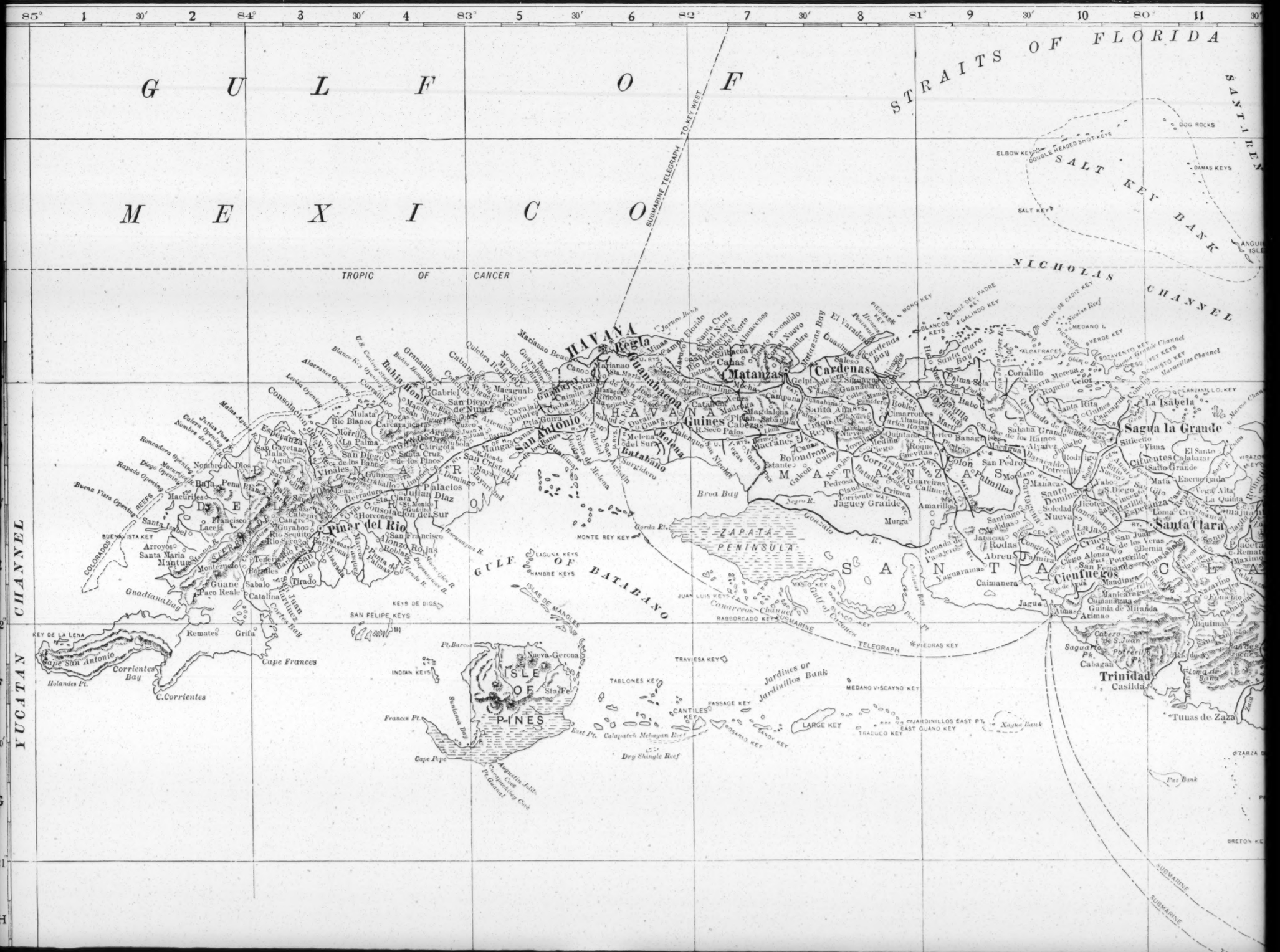
GULF OF MEXICO
STRAITS OF FLORIDA
SALT KEY BANK
NICHOLAS CHANNEL
YUCATAN CHANNEL
TROPIC OF CANCER
SUBMARINE TELEGRAPH TO KEY WEST
HAVANA
Regla
Cabañas
Matanzas
Cardenas
Guines
Batabano
Melena del Sur
Bolondron
Colon
San Pedro
Palmillas
Corral Falso
Sagua la Grande
Siticeito
Viana
Cifuentes
Santa Clara
Cienfuegos
Trinidad
Casilda
Tunas de Zaza
Pinar del Rio
Consolacion del Sur
Julian Diaz
Palacios
Alonzo Rojas
Guane
Sabalo
Tirado
Paco Reale
Remates
Grifa
Cape Frances
C. Corrientes
Corrientes Bay
Bahia Honda
Mariel
Guanajay
Caimito
Artemisa
San Antonio de los Baños
Guara
Melena
Batabano
Surgidero
Jaruco
Santa Cruz del Norte
Matanzas
Cardenas
Siguanea
Palma Sola
Corralillo
Sierra Morena
Rapcho Velez
Santa Rita
Guines
Caraballas
Quemado de Guines
Salana Grande
Alvarez
Barraycito
Potrerillo
Manacas
Santo Domingo
Soledad
Nueva
Lajas
Cruces
Palmira
Cienfuegos
Abreus
Rodas
Jagueyes
Jagua
Aimas
Arimao
Caimanera
Guantanamo
Jaguaramas
Caunao
Mandinga
Manicaragua
Guinia de Miranda
Cabeza de S. Juan
Saguaros Pk.
Potrerillo Pk.
Calagan
Loma de Banao
Jiquimas
Zaza
Broa Bay
Negro R.
Gonzalo R.
Murga
Amarillos
Zapata Peninsula
Gulf of Batabano
Laguna Keys
Chambre Keys
Islas de Mangles
Keys de Dios
San Felipe Keys
Monte Rey Key
Gerda Pt.
Juan Luis Keys
Cayo Piedras
Vasco Key
Cayo Blanco
Raborcado Keys
Piedras Key
Isle of Pines
Nueva Gerona
Pt. Barco
Indian Keys
Traviesa Key
Tablones Key
Cantiles Key
Passage Key
Rosario Key
Sandy Key
Large Key
Medano Viscayno Key
Jardines or Jardinillos Bank
Guardinillos East Pt.
East Guano Key
Traduco Key
Xagua Bank
Dry Shingle Reef
Calapatch Mehagan Reef
Frances Pt.
Cape Pye
East Pt.
Stanislaus Bay
Augustin Jabbo Cove
Pt. Quartel
Holandes Pt.
Bajo San Antonio
Key de la Lena
Guadiana Bay
Cortez Bay
Buena Vista Key
Colorados
Arroyos
Santa Maria
Mantua
Santa Isabel
Macurijes
Francisco
Laceja
Nombre de Dios
Baja
Pena Blanca
Buena Vista Opening
Rapada Opening
Diego Opening
Roncadera Opening
Culera Opening
Justias Pass
Mañana Apuntes
Consolacion Opening
Alacranes Opening
Lerida Opening
Blanco Key Opening
Granadillas
Bahia Honda
Rio Blanco
Mulata
Pozas
Carcaraicaras
Morrillo
La Palma
Esperanza
San Cayetano
Alala
Agua
Cabo
Guayabo
Rio Seguito
Teferi
Roques
Pinar del Rio
Vinales
Guasa
Herradura
Sta. Clara
Horcones
San Francisco
Robles
Pinta de Palmas
Barrancas
Sabanilla
Cangre
Rio Seco
Sta. Luis
Juan Vasquez
Macagual
Cayajabos
Dolores
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Quivican
Guara
Melena del Sur

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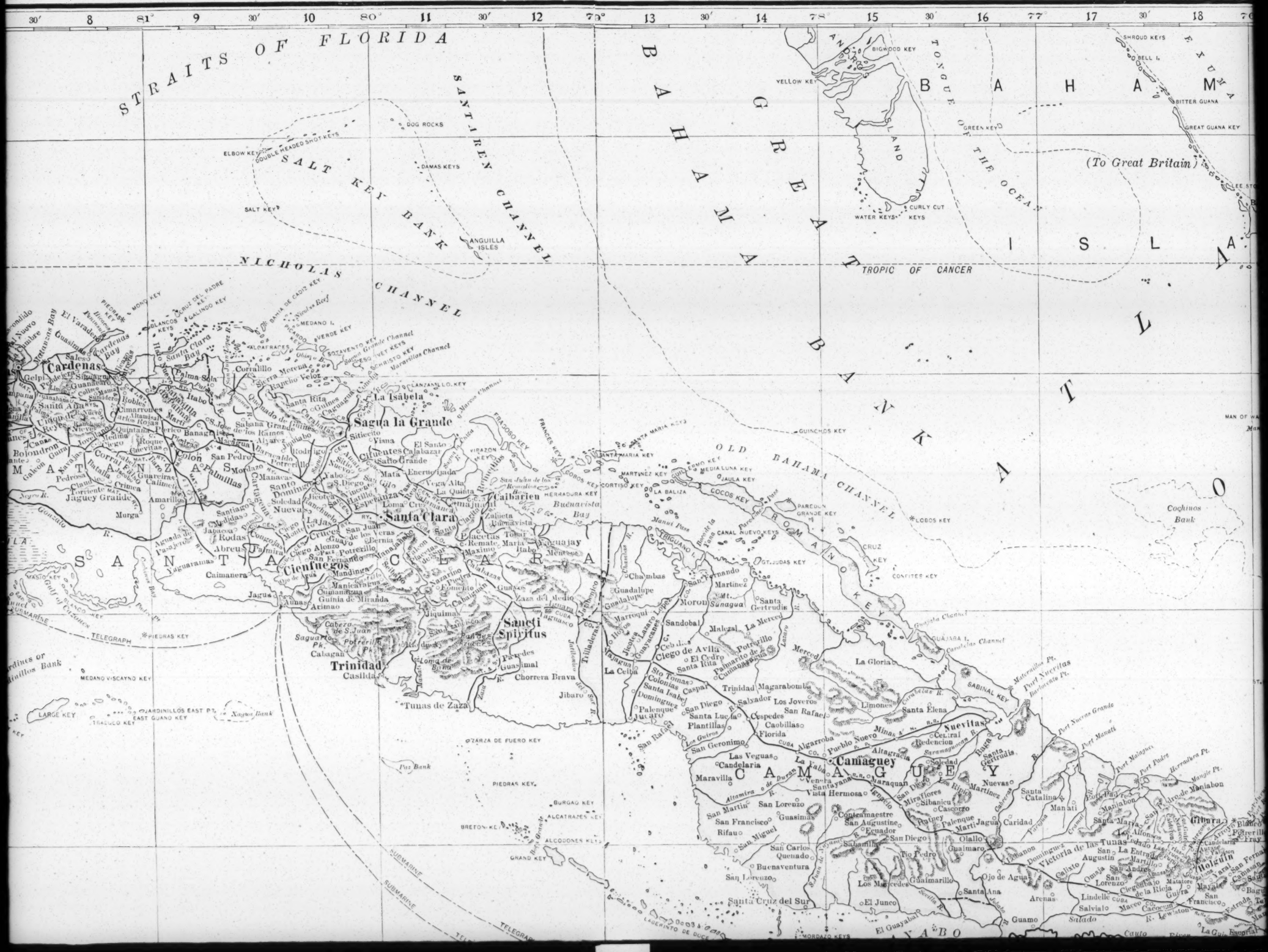
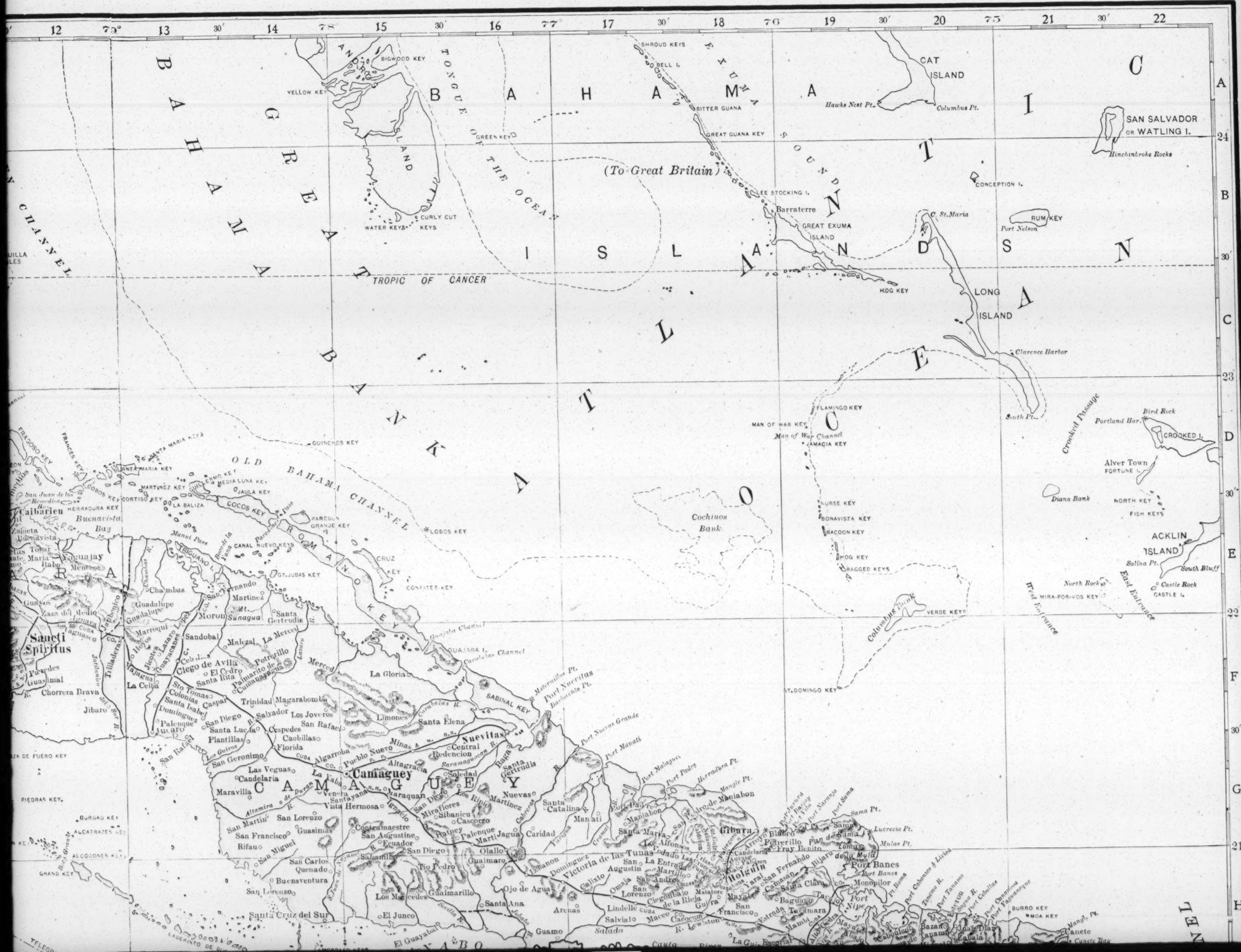
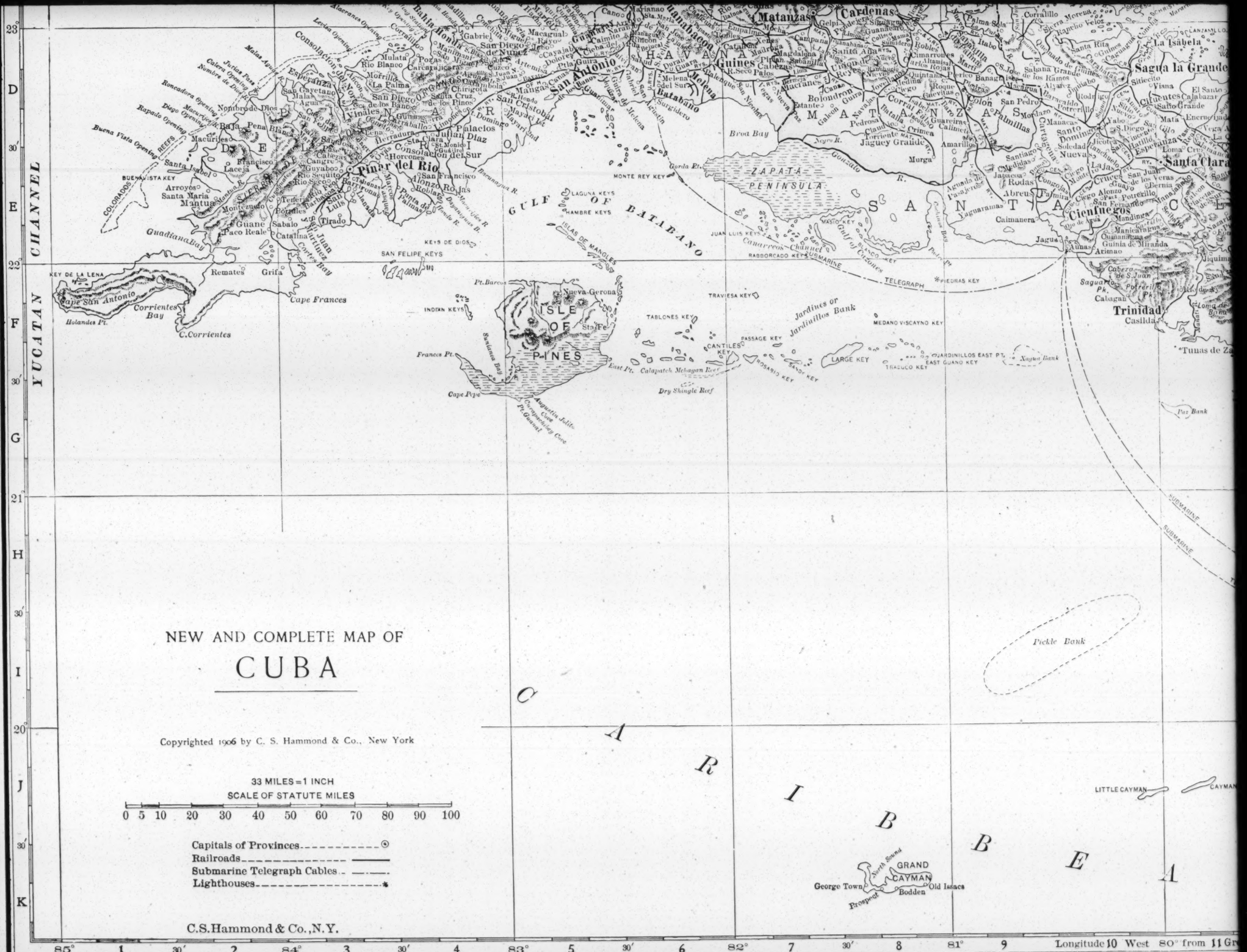

STRAITS OF FLORIDA
SALT KEY BANK
SANTAREN CHANNEL
NICHOLAS CHANNEL
BAHAMA BANK
GREAT BAHAMA ISLAND
TONGUE OF THE OCEAN
ANDROS ISLAND
BAHAMA ISLANDS
OLD BAHAMA CHANNEL
ROMANO KEY
(To Great Britain)
TROPIC OF CANCER
YELLOW KEY
BIGWOOD KEY
SHROUD KEYS
BELL I.
BITTER GUANA
GREAT GUANA KEY
GREEN KEY
CURLY CUT KEYS
WATER KEYS
ELBOW KEY
DOUBLE HEADED SHOT KEYS
DOG ROCKS
DAMAS KEYS
SALT KEY
ANGUILLA ISLES
Cochinos Bank
Cardenas
Sagua la Grande
La Isabela
Santa Clara
Caibarien
Cienfuegos
Trinidad
Sancti Spiritus
Camaguey
Tunas de Zaza
Jagua
Casilda
Morón
Ciego de Avila
Victoria de las Tunas
Holguin
Gibara
Santa Cruz del Sur
Manzanillo
Bayamo
Guantanamo
Baracoa
Nuevitas
Puerto Padre
Port Antonio
Port Maria
Port Manati
Port Nuevas Grande
Port Malagues
Port Nuevitas
Port Tarafa
Port Barbacoa Pt.
Herradura Pt.
Mangle Pt.
Matanzas Pt.
Matanzas Bay
Cardenas Bay
Santa Clara Bay
Buenavista Bay
Gaspar Bay
Guajara I.
Cochinos Bay
Guacanayabo Gulf
Gulf of Guacanayabo
Gulf of Buena Esperanza
Gulf of Batabano
Gulf of Cazones
Gulf of Guacanayabo
Gulf of Guacanayabo
Gulf of Guacanayabo


BAHAMA ISLANDS
BAHAMA BANK
ATLANTIC OCEAN
OLD BAHAMA CHANNEL
ROMANO KEY
TROPIC OF CANCER
(To Great Britain)
TONGUE OF THE OCEAN
EXUMA SOUND
CAT ISLAND
SAN SALVADOR OR WATLING I.
Hinchinbroke Rocks
Hawks Nest Pt.
Columbus Pt.
BIGWOOD KEY
YELLOW KEY
ANDROS ISLAND
SHROUD KEYS
BELL I.
BITTER GUANA
GREAT GUANA KEY
GREEN KEY
WATER KEYS
CURLY CUT KEYS
LEE STOCKING I.
Barraterre
GREAT EXUMA ISLAND
CONCEPTION I.
C. St. Maria
RUM KEY
Port Nelson
HOG KEY
LONG ISLAND
Clarence Harbor
FLAMINGO KEY
MAN OF WAR KEY
Man of War Channel
JAMACIA KEY
South Pt.
Crooked Passage
Bird Rock
Portland Har.
CROOKED I.
Alver Town
FORTUNE I.
Diana Bank
NORTH KEY
FISH KEYS
NURSE KEY
BONAVISTA KEY
RACOON KEY
HOG KEY
RAGGED KEYS
Cochinos Bank
ACKLIN ISLAND
Salina Pt.
South Bluff
North Rock
Castle Rock
CASTLE I.
East Entrance
West Entrance
MIRA-POR-VOS KEY
VERDE KEYS
Columbus Bank
ST. DOMINGO KEY
GUINCHOS KEY
SANTA MARIA KEY
MARTINEZ KEY
CORTIJO KEY
LA BALIZA
COCOS KEY
PARGON GRANDE KEY
LOBOS KEY
CRUZ KEY
CONFITES KEY
GT. JUDAS KEY
TRIGUANO I.
CANAL NUEVO KEYS
JAULA KEY
MEDIA LUNA KEY
CUERVO KEY
FRAILES KEY
FRANCES KEY
TRAPOSO KEY
HERRADURA KEY
Caibarien
Buenavista Bay
Zulueta
Tobar
Yaguajay
Itabo
Mentoco
Chambas
Guadalupe
Jaza del Medio
Sancti Spiritus
Paredes
Guasimal
Chorrera Brava
Jibaro
Morón
Sunagua
Mt. Martinez
San Fernando
Santa Gertrudis
Malezal
La Merced
Sandobal
Potrerillo
Palmarito de Cunagua
Ceiba de Avilla
El Cedro
Santa Rita
Trinidad
Magarabomba
Salvador
Los Joveros
Limones
Santa Elena
Nuevitas
Central Redencion
Soledad
Saramaguacan
Bisco
Santa Gertrudis
Nuevas
Martinez
Los Ripios
Santa Catalina
Manati
Port Manati
Port Nuevas Grande
Port Nuevitas
Barbacoa Pt.
Matanillas Pt.
SABINAL KEY
Guajaba Channel
Carabelas Channel
Carabelas R.
La Gloria
Merced
Guajaba I.
Port Malagues
Port Padre
Herradura Pt.
Mangle Pt.
Pedro de Maniabon
Port Naranjo
Sama Pt.
Lucrecia Pt.
Mulas Pt.
Gibara
Blanco
Porrerillo
Fray Benito
Santa Maria
Los Alfonsos
Candelaria
Bariay
Port Banes
Monopilor
Pt. Roma
Holguin
Yeral
San Fernando
Catuasan
Santa Clara
Baguano
Tacajo
Port Nipe
Bazan
Capanay
Cabo Lucrecia
Cabo Cobre
Cabo Cobanos
Cabo Tanamo
Tenerio R.
Port Tanamo
Nipe R.
Port Cabonico
Port Taguayabon
Port Cabonico
Port Cabolitas
BURRO KEY
MOA KEY
Mangle Pt.
Canete
Canete Bay
Cabo Diaz
Caballones
Caballones de Licinio
Port Licinio
Port Cabonico
Port Taguayabon
Port Cabolitas
Port Tanamo
Tenerio R.
Nipe R.
Port Cabonico
Port Taguayabon
Port Cabolitas
Port Tanamo
Tenerio R.
Port Tanamo


NEW AND COMPLETE MAP OF
CUBA
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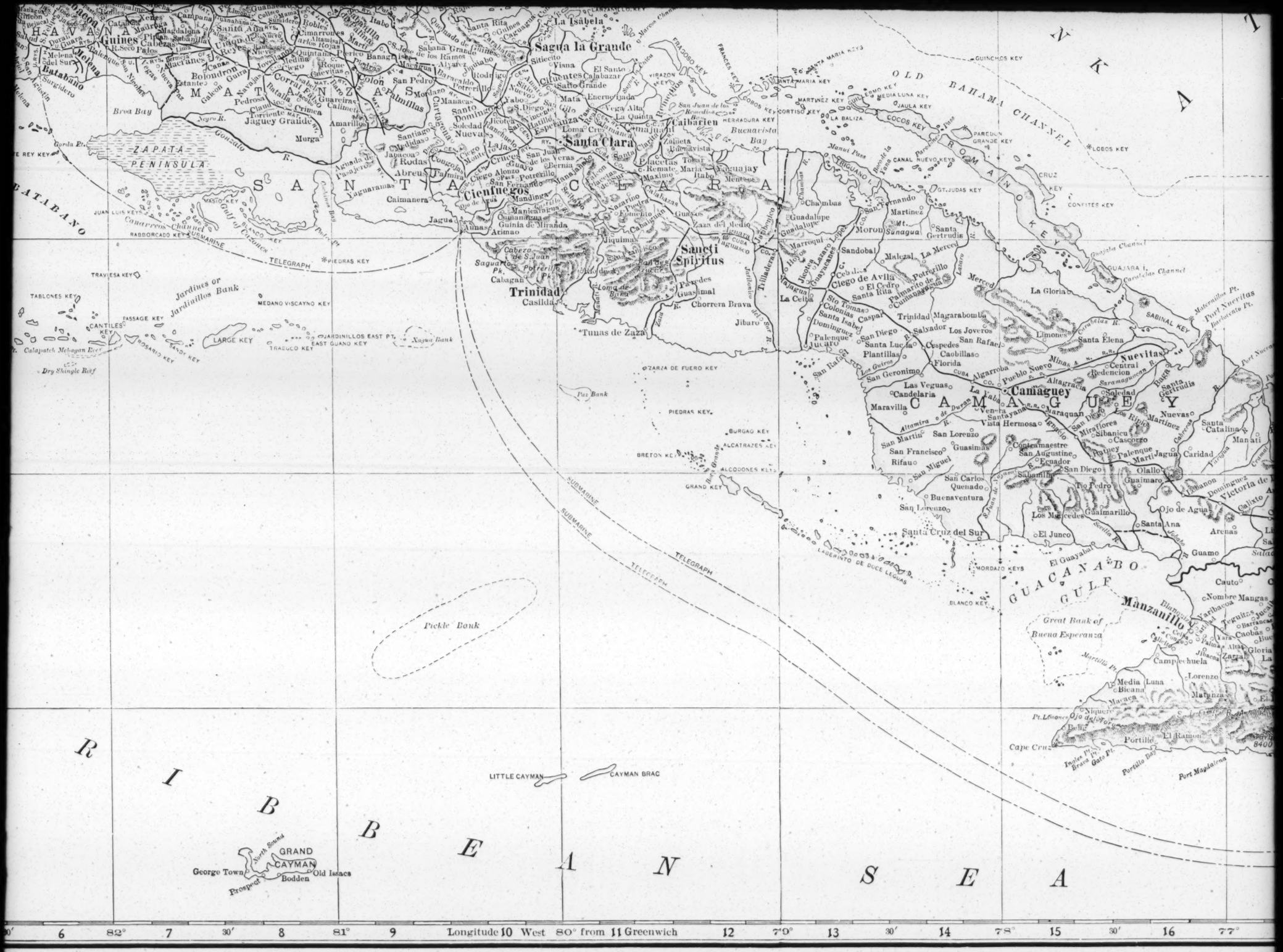
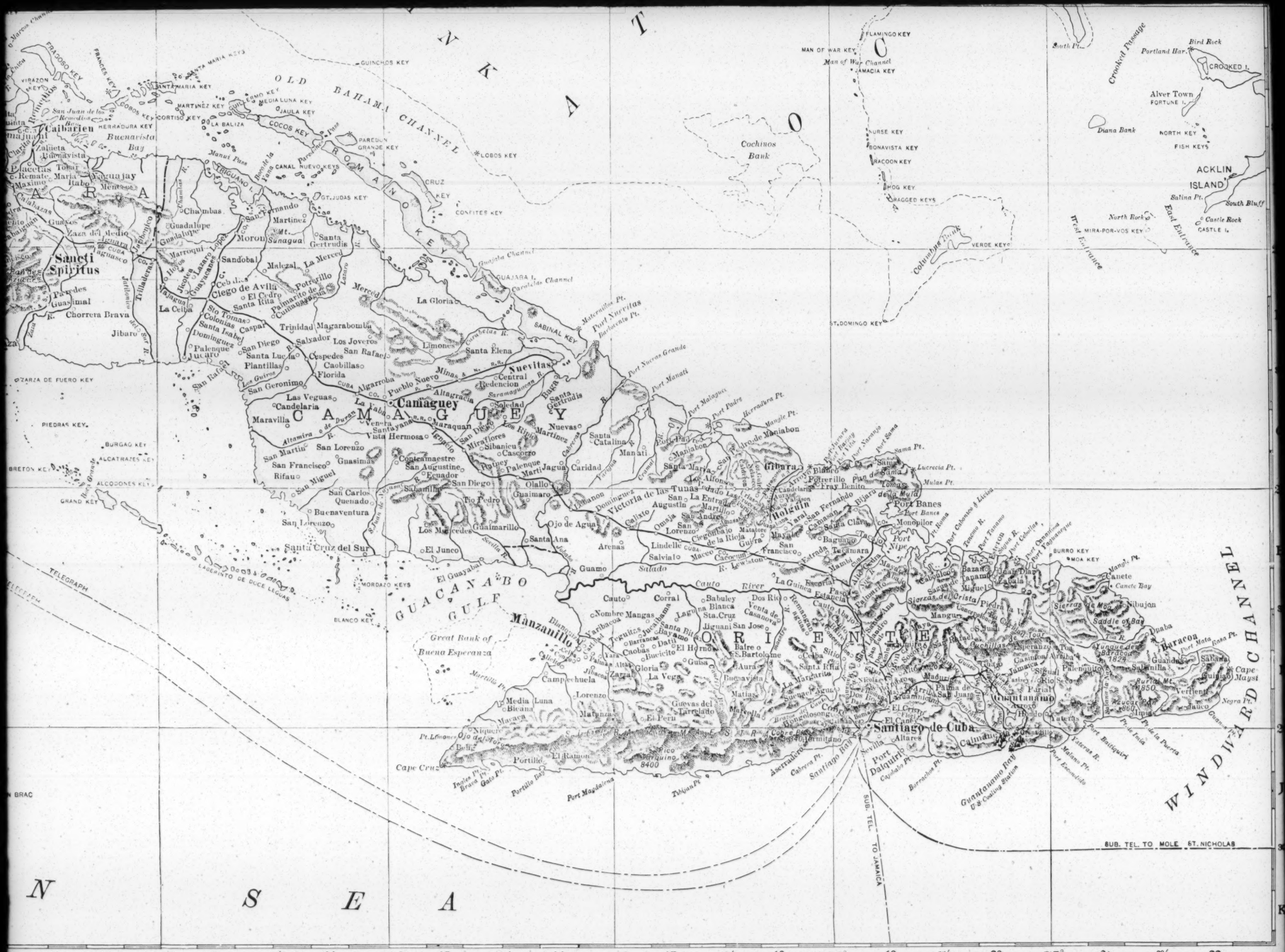
33 MILES = 1 INCH
SCALE OF STATUTE MILES
0 5 10 20 30 40 50 60 70 80 90 100
Capitals of Provinces
Railroads
Submarine Telegraph Cables
Lighthouses
C.S. Hammond & Co., N.Y.
YUCATAN CHANNEL
GULF OF BATABANO
CARIBBEAN SEA
ISLE OF PINES
Nueva Gerona
Sta. Fe
Pinar del Rio
Matanzas
Cardenas
Cienfuegos
Trinidad
Sagua la Grande
Santa Clara
Batabano
San Antonio
Guanajay
Guanabacoa
Melena del Sur
Bahia Honda
Consolacion del Norte
Consolacion del Sur
Cape San Antonio
Cape Frances
C. Corrientes
Corrientes Bay
Guadiana Bay
Cape Fayo
Frances Pt.
Pt. Barcos
Indian Keys
Keys de Dios
San Felipe Keys
Key de la Lena
Buena Vista Opening
Rapado Opening
Roncadora Opening
Nombre de Dios Opening
Colorados
Buena Vista Key
Monte Rey Key
Laguna Keys
Hambre Keys
Islas de Mangles
Juan Luis Keys
Rabborcado Key
Canarreos Channel
Submarine Telegraph
Piedras Key
Traviesa Key
Tablones Key
Cantiles Key
Passage Key
Rosario Key
Sand Key
Large Key
Medano Viscayno Key
Jardines or Jardinillos Bank
Jardinillos East Pt.
East Guano Key
Traduco Key
Xagua Bank
Paz Bank
Pickle Bank
Dry Shingle Reef
Calajatch Mchagan Reef
Broa Bay
Gerda Pt.
Zapata Peninsula
Negro R.
Gonzalo R.
Jaguey Grande
Murga
Caimanera
Jagua
Cienfuegos
Trinidad
Casilda
Tunas de Zaza
Little Cayman
Cayman
Grand Cayman
George Town
Prospect
North Sound
Bodden
Old Isaacs
Longitude 10 West 80° from 11 Gr

XUM


HABANA
Guines
Batabano
MATANZAS
Cardenas
Colon
San Pedro
Palmillas
Bolondron
Union de Reyes
Jaguey Grande
Corral Falso
Guareiras
Crimea
Amarillo
Murga
Brea Bay
Negro R.
Gordo Pt.
ZAPATA PENINSULA
SANTA CLARA
Cienfuegos
Caimanera
Jagua
Rodas
Abreus
Palmira
Cruces
Cienaga
Lajas
Santa Clara
Sagua la Grande
Siticeto
Viana
Cifuentes
Calabazar
Salto Grande
Mata
Enenrejada
Vega Alta
La Quinta
Caibarien
Buenavista Bay
Zulueta
Ranchuela
Esperanza
Loma Cruz
Manajanabo
Falcon
Placetas
Remate
Maximo
Itabo
Yaguajay
Mendez
Sancti Spiritus
Trinidad
Casilda
Tunas de Zaza
Jiquima
Cabeza de S. Juan
Potrerillo Pk.
Cabagan
Paredes
Guasimal
Chorrera Brava
Jibaro
Jardines or Jardinillos Bank
Canarreos Channel
Gulf of Guacanayabo
TELEGRAPH
SUBMARINE
PIEDRAS KEY
TRAVIESA KEY
TABLONES KEY
MEDANO VISCAYNO KEY
PASSAGE KEY
CANTILES KEY
LARGE KEY
ROSARIO KEY
SANDY KEY
TRABUCO KEY
JARDINILLOS EAST PT.
EAST GUANO KEY
Xagua Bank
Calapatch Mahagan Reef
Dry Shingle Reef
ZARZA DE FUERO KEY
Paz Bank
PIEDRAS KEY
BURGAO KEY
ALCATRAZES KEY
BRETON KEY
GRAND KEY
ALCODONES KEYS
LABERINTO DE DOCE LEGUAS
Pickle Bank
LITTLE CAYMAN
CAYMAN BRAC
GRAND CAYMAN
George Town
Prospect
North Sound
Bodden
Old Issacs
RIBBEAN SEA
OLD BAHAMA CHANNEL
GUINCHOS KEY
SANTA MARIA KEY
MARTINEZ KEY
CORTIS KEY
JAULA KEY
MEDIA LUNA KEY
LA BALIZA
COCOS KEY
PAREDON GRANDE KEY
LOBOS KEY
HERRADURA KEY
FRANCES KEY
FRACOSO KEY
VIRAZON KEY
TRIGUANO I.
CANAL NUEVO KEYS
ROMANO KEY
CRUZ KEY
CONFITES KEY
GT. JUDAS KEY
GUAJABA I.
Guajaba Channel
Caralelas Channel
SABINAL KEY
Chambas
Guadalupe
Martinez
Moron
Sunagua
Santa Gertrudis
Sandobal
Malezal
La Merced
Ceballos
Ciego de Avila
El Cedro
Potrerillo
Palmarito de Cuenaga
Santa Rita
La Gloria
Limones
Santa Elena
Nuevitas
Central Redencion
Soledad
Santa Gertrudis
Camaguey
CAMAGUEY
Altagracia
Pueblo Nuevo
Algarroba
Las Veguas
Candelaria
Maravilla
Vista Hermosa
Nuevas
Martinez
Santa Catalina
Manati
Caridad
Jagua
Palenque
Martin
Sibanicu
Cascorro
Guaimaro
Olallo
Ojo de Agua
Arenas
Guamo
Cauto
Nombre Mangas
Manzanillo
Great Bank of Buena Esperanza
Campechuela
Media Luna
Bicana
Macaca
Lorenzo
Manzanas
Niquero
Ojo del Toro
Portillo
El Ramon
Cape Cruz
Ingles Pt.
Brava
Gato Pt.
Portillo Bay
Port Magdalena
Santa Cruz del Sur
El Junco
Los Mercedes
Guaimarillo
Santa Ana
Tio Pedro
San Diego
Siguanea
Contramaestre
San Augustine
Ecuador
Rifaud
San Francisco
San Lorenzo
Guasimas
San Martin
Mirasflores
Los Rios
Palenque
Jagua
Caridad
Nuevas
Martinez
Santa Catalina
Manati
Tarigua
Cabrera
Baga
Santa Gertrudis
Saramaguacan
Soledad
Redencion
Central
Nuevitas
Minas
Florida
Caobillaso
Cespedes
San Rafael
Los Joveros
Salvador
Trinidad
Magarabomba
Caspar
Colonia Santa Isabel
Dominguez
Palenque
Lucaro
San Diego
Santa Lucia
Plantillas
Los Guiros
San Geronimo
Cubagua
Caballones
Sto Tomas
Jicotea
Lazaro Lopez
Guaracabuya
Marroqui
Hoyos
Chambas
San Fernando
Martinez
Guadalupe
Guadalupe


ATLANTIC OCEAN
GULF OF GUACANAYABO
CARIBBEAN SEA
WINDWARD CHANNEL
OLD BAHAMA CHANNEL
ROMANO KEY
Cochinos Bank
Columbus Bank
Man of War Channel
Crooked Passage
Diana Bank
ACKLIN ISLAND
Camaguey
Manzanillo
Santiago de Cuba
Guantanamo
Baracoa
Gibara
Holguin
Nuevitas
Sancti Spiritus
Santa Cruz del Sur
Jibaro
Caibarien
Cape Cruz
Cape Maysi
Great Bank of Buena Esperanza
Port Banes
Port Nipe
Port Dalquiri
Guantanamo Bay
SUB. TEL. TO JAMAICA
SUB. TEL. TO MOLE ST. NICHOLAS
Greenwich
12
79°
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30′
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VOL. XVII, No. 10 WASHINGTON OCTOBER, 1906

THE NATIONAL GEOGRAPHIC MAGAZINE

CUBA—THE PEARL OF THE ANTILLES*

THE island of Cuba is especially favored by nature in point of both geographical position and material resources. It lies at the gateway of the Gulf of Mexico, midway between the United States on the north and Mexico and South America on the south, and is the largest and by far the richest in natural resources of all the scores of islands and islets on the north, east, and south, and forming collectively what is generally termed the West Indies.

Cuba is entirely within the Torrid Zone, but not so far south as to make its climate characteristically torrid. The temperature does not differ materially from that of our own Gulf states, though the rainfall is greater. Its insularity insures a moist, equable atmosphere, as in the case of Great Britain, and the sea breezes of the afternoons and evenings tend to make the nights cool and comfortable, even in the warmest months. The outlying Bahaman chain of islands and banks shelters it in a great measure from the cold Atlantic gales of winter, and about its only climatic disadvantage consists in its exposure to the occasional Caribbean hurricanes.

The island is long and narrow and its longitudinal trend is nearly easterly and westerly. It is 730 miles long and its width varies from about 25 miles to about 100 miles. Its area comprises about 44,000 square miles. In respect to these features and dimensions, as well as in some other respects, there is a striking similarity between Cuba and Java, in the East Indies. In area it is about as large as Pennsylvania or Louisiana. The coast lines are exceedingly jagged and irregular, and the coasts themselves are generally either rocky or marshy and in many places menaced by outlying reefs and sand banks, notwithstanding which there are a number of safe and commodious harbors, notably those of Habana, Matanzas, Cardenas, Nuevitas, Cienfuegos, Manzanillo, Santiago de Cuba, and Guantanamo. The harbor of Habana, as is well known, is one of the largest and finest in the world. The Cienfuegos harbor is also a very fine one.

Measuring from the points of nearest approach to its neighbors, Cuba is about 100 miles from Key West, Florida; 54 miles from Haiti, 85 miles from Jamaica, and about 130 miles from Yucatan, on the

* This article is derived from the following authorities, all of which are particularly recommended to those desiring further information on the subject:

"Commercial Cuba in 1905," by O. P. Austin, published by Bureau of Statistics, Department of Commerce and Labor; "Handbook of Cuba," by Senor Gonzalo de Quesada, Minister of Cuba to the United States, published by the Bureau of American Republics, 1905; "Census of Cuba, 1899," by Gen. J. P. Sanger, Henry Gannett, and W. F. Willcox, published by the War Department; "Commercial Cuba," by Edwin V. Morgan, U. S. Minister to Habana, Consular Reports No. 2629, August 1, 1906; "Trade Conditions in Cuba," by Charles M. Pepper, published by the Department of Commerce and Labor, 1906.

XUM

north, east, south, and west respectively. Habana is distant from Tampa, Florida, 306 miles; from New Orleans, 597 miles; from New York City, 1,227 miles; from Plymouth, England, 3,527 miles, and from Gibraltar, 4,323 miles.

The island is divided into six provinces, each extending entirely across the width of the island. Beginning at the west and proceeding in order toward the east, these provinces are named as follows: Pinar del Rio, Habana, Matanzas, Santa Clara, Camaguey (known as Puerto Principe until recently changed by vote of the people), and Oriente (formerly known as Santiago de Cuba). The "backbone" of the island consists of a range of hills or mountains, attaining an elevation of 2,500 feet in Pinar del Rio, and 5,000 feet, with an extreme instance of about 8,300 feet, in Oriente, but much lower altitudes in the other four provinces. Except in Oriente, these hills or mountains are in no case formidable or unavailable for cultivation, and the greater part of the island consists of broad, rolling plains or gently undulating hills, interspersed with stream-drained valleys, and already proved to be susceptible of a high degree of cultivation.

The soil in the main, and except in the most marshy and most mountainous regions, is rich and easily cultivable. It is principally of the best varieties of the Tertiary and Secondary geological formations and adapted to the production of bountiful crops of many valuable staples. Certain sections of the land that are not particularly suitable for arable purposes are nevertheless admirably adapted for grazing uses, and the more elevated tracts, if in some localities unfitted for either cultivation or grazing, are still rich in mineral wealth, so that it may be said with truth that practically the whole island is overflowing with natural riches.

Furthermore, most of the higher lands are covered with a virgin forest containing immense quantities of valuable timber. The list of the native flora of the island includes more than 3,350 plants, including many of the best and most useful species of wood known to mankind. Game is abundant, such as deer, rabbits, wild boars, wild turkeys, pheasants, snipe, etc., and there are more than 200 species of native birds, many of them wearing gorgeous plumage. As usual in tropical countries, there are some unwelcome inhabitants, such as crocodiles, snakes, tarantulas, scorpions, and various annoying insects, but none of the snakes are venomous and there are no dangerous wild beasts.

The rivers are short, small, and mainly unnavigable, but they are quite numerous and all-sufficient for the purposes of drainage and irrigation, and in some cases for water power.

So richly endowed with natural advantages, Cuba, not without reason, has been entitled the "Pearl of the Antilles" and the "Gem of the Seas."

The original Indian native race of Cuba has entirely disappeared. The exact number of inhabitants at the time of the appropriation of the island by Spain is of course not known, even approximately; they may have numbered several hundred thousand; but they met the usual fate of the weaker race in the onward march of the stronger.

In the course of a century or thereabout the place of the natives had been filled by imported negro slaves. The present colored inhabitants of Cuba are, in general, the descendants of these slaves. They are now free, slavery having been abolished in 1880.

The white Cubans, or Cubans proper, are mainly the descendants of the original Spanish settlers from Spain, Haiti, Florida, and Louisiana, and of the French settlers who fled to Cuba from Haiti during the race wars in that island a century ago. The Spanish Cubans remained devotedly loyal to Spain during many decades of oppressive misrule, enduring all their injuries and sacrifices with a noble patience which has become proverbial and which won for Cuba the sobriquet of "the ever-faithful isle." At last the time came when even this patience was exhausted, and the isle was lost to Spain.

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PRESENT POPULATION ABOUT 1,700,000

The population of Cuba, according to the census taken under the direction of the United States War Department in 1899, was 1,572,797. Twelve years earlier, in 1887, according to a census under Spanish authority, the number was 1,631,687, or nearly 59,000 greater. After allowing for the probable increase of the population between 1887 and 1895, the date on which the insurrection broke out, the loss of life, as indicated by these two censuses, may be estimated at nearly 200,000, a loss which may be attributed to the war and to the accompanying reconcentration. The loss of population incident to the insurrection was sustained entirely by the three western provinces, the three eastern provinces having gained during the period between 1887 and 1899, although Santa Clara, one of the largest provinces of the island, gained but a trifling amount.

In 1903 the population was estimated at 1,653,486, and taking into consideration the natural increase and the number of immigrants which have settled in Cuba, it may be safely said that the population reaches, in 1906, 1,700,000 souls, and that Habana has more than 275,000 The center of population of Cuba in 1899 was situated in Santa Clara Province, 30 miles southwest of the city of Santa Clara and 8 miles northwest of Cienfuegos. It is at a distance of 75 miles northwest of the geographic center of the island.

The urban population of Cuba, including in that term the inhabitants of all cities of more than 8,000 population, was 32.3 per cent of the entire population, or a little less than one-third, being but a trifle smaller than that of the United States. Including, however, all cities down to 1,000 each, the proportion of urban population rises to 47.1 per cent, that of the United States being the same. The capital and chief city of the island is Habana, situated on the north coast near its western end. Other important cities are Santiago, the capital of Oriente Province, on the south coast, near the eastern end of the island, population 43,090; Matanzas, the capital of Matanzas Province, on the north coast, population 36,374; Cienfuegos, in Santa Clara Province, on the south coast, population 30,038; Camaguey, the capital of the province of the same name, situated in the interior, population 25,102; Cardenas, on the north coast, in Matanzas Province, population 21,940. Most of the larger cities are situated on the seacoast rather than in the interior, indicating their commercial character.

In former times the Cuban cities were unhealthful, owing to insanitary conditions, and yellow fever was prevalent; but by the adoption of energetic and scientific measures during and since the recent United States occupation, these conditions have been materially improved and the fever has almost disappeared. The health status of the island is now quite satisfactory. The mortality in the island during 1902 was 25,512, and in 1903, 23,982, and the annual death rate diminished from 15.43 in 1902 to 14.52 in 1903. If a comparison is made with the lowest rate in the Spanish regime, 29.30 per thousand in 1885, and with the average rate for the thirty years ending 1900, of 41.95 per thousand, the wonderful progress made can be seen.

The figures as to the density of population are significant. They indicate a population of 153 persons to the square mile in the Province of Habana, 55 in Matanzas, 37 in Santa Clara, 35 in Pinar del Rio, 26 in Oriente, and only 8 in Camaguey. In other words, Havana Province is as thickly inhabited as New York State and Camaguey about as much so as Washington State. The density of population throughout the two republics is nearly equal, that of Cuba being somewhat greater than that of the United States. A relatively larger area remains uncultivated or unsettled in Cuba, and practically all the unsettled area in the island is available for high cultivation, whereas vast expanses of territory in the United States are unavailable for this

purpose on account of aridity or inaccessibility. It has been estimated that Cuba is capable of supporting in comfort and prosperity a population of at least 15,000,000. That would be 340 to the square mile, which is less than the density of population in Rhode Island or Massachusetts, where life is on a very comfortable and civilized plan, and much less than the density in most tropical countries. Allusion has been made to Java as affording many points of resemblance to Cuba. In respect to population it affords at least one point of decided difference. The area of Java is about 49,000 square miles; that of Cuba about 44,000. The population of Java is about 28,000,000; that of Cuba about 1,630,000. The density of population of Cuba is about 36 to the square mile; that of Java is about 570 to the square mile.

ABOUT ONE-THIRD OF POPULATION ARE COLORED

As to sex, the population was distributed in the proportions of 51.8 per cent males and 48.2 per cent females, the excess in number of males being probably due to immigration.

As to race, there were 58 per cent native white, 9 per cent foreign white, and 32 per cent colored. The colored formed less than one-third of the population, and their proportion has for many years been diminishing. Three-fourths of all the foreign-born in Cuba came from Spain. Of the remainder, the countries which most frequently contributed were China, Africa, and the United States.

The illiteracy of the population, though deplorable, is not surprising in consideration of the history of the island. According to the census of 1899, the proportion of illiteracy (inability to read or write any language) among the white native citizens was 51 per cent and among the colored citizens 74 per cent. The later reports from the island, however, contributed by Gen. Leonard Wood in 1902, and since then by the Cuban authorities, show a great and constant improvement in this important respect. The Cubans are very intelligent and quick to learn, and are now also ambitious to learn, and the stigma of illiteracy will not much longer deface the island in a noticeable degree.

The census of 1899 reports nearly 40 per cent of the Cuban population as engaged in gainful occupations, as against about 38 per cent in the United States by the census of 1900. This, it must be conceded, is a praiseworthy showing on the part of the Cubans. Of their 640,000 or so of bread-winners, about 48 per cent are classified as engaged in agriculture, fisheries, and mining; about 23 per cent in domestic and personal service; about 15 per cent in manufacturing and mechanical pursuits; about 13 per cent in trade and transportation, and about 1 per cent in professional service. These were the percentages of 1899, and it is understood that about the same proportions are observable now, although the professional class is apparently increasing its percentage of late and the manufacturing and transportation interests are undoubtedly drawing recruits from the purely agricultural ranks.

RESULTS OF UNITED STATES OCCUPATION

The occupation of the island by the United States authorities, or "intervention," as it is termed in Cuba, lasted for about three years and a half—from January 1, 1899, to May 20, 1902. The intervention was undertaken solely in order to protect the Cubans from molestation from outside while they were recovering from the wounds and ravages of war, and to assist them in putting their new house in order. As soon as this was accomplished and a "stable government" established in the new republic, the intervention was withdrawn.

The closing paragraphs of Gen. Leonard Wood's final report of 1902 contain an effective summary of the principal services rendered to the people of Cuba by the United States temporary government in the island, as follows:

"The government was transferred as a 'going concern;' all the public offices

were filled with competent, well-trained employees; the island was free from debt, other than such obligations as were of a current character, and had a surplus of over a million and a half dollars available for allotment; was possessed of a thoroughly trained and efficient personnel in all departments and completely equipped buildings for the transaction of public business; the administration of justice was free; *habeas corpus* had been put in force; old prison abuses had been stopped; police courts had been established; a new marriage law on lines proposed by the Roman Catholic bishop of Havana, giving equal rights to all denominations, was in operation; a general electoral law embodying the most enlightened principles of modern electoral laws had been put in force, and the people were governed in all municipalities throughout the island by officials of their own choice elected under this law; trials in Cuban courts were as prompt as in any state in the Union, and life and property were absolutely safe; sanitary conditions were better than those existing in most parts of the United States; yellow fever had been eradicated from the island; a modern system of public education, including a reorganized university, high schools, and nearly 3,700 public schools, and laws for its government, was in successful operation; well-organized departments of charities and public works operating under laws framed by the military government had been established; a new railroad law had been promulgated; the customs service had been thoroughly equipped; the great question of church property had been settled; a basis of settlement between mortgage creditors and debtors had been agreed upon and in successful operation for a year; municipalities had been reduced from 138 to 82 in number; public order was excellent; the island possessed a highly organized and efficient rural guard; an enormous amount of public works had been undertaken and completed; ports and harbors had been much improved; old lighthouses had been thoroughly renovated and new ones built; Cubans and Spaniards were living in harmony; in short, the government as transferred was in excellent running order; the people were making rapid progress; beggars were practically unknown; the courts had the confidence and respect of the people. * * *

"The work called for and accomplished was the building up of a republic by Anglo-Saxons in a Latin country where approximately 70 per cent of the people were illiterate; where they had lived always as a military colony; where general elections, as we understand them, were unknown; in fact, it was a work which called for practically a rewriting of the administrative law of the land, including the law of charities and hospitals, public works, sanitary law, school law, railway law, etc.; meeting and controlling the worst possible sanitary conditions; putting the people to school; writing an electoral law and training the people in the use of it; establishing an entirely new system of accounting and auditing; the election and assembling of representatives of the people to draw up and adopt a constitution for the proposed new republic; in short, the establishment in a little over three years, in a Latin military colony in one of the most unhealthy countries in the world, of a republic modeled closely upon lines of our great republic, and the transfer to the Cuban people of the republic so established, free from debt, healthy, orderly, well equipped, and with a good balance in the treasury. All of this work was accomplished without serious friction. The island of Cuba was transferred to its people as promised, and was started on its career in excellent condition and under favorable circumstances."

THE LABOR QUESTION

Cuba is entirely dependent upon the products of her fields for her economic prosperity. She does not carry and exchange merchandise for other countries, nor does she manufacture except to supply certain special and local demands or

to place her crops most easily and economically upon the market. These conditions determine the character of her industrial life. Her highly skilled workmen have mostly come from beyond the seas. The labor question has not assumed a social aspect. It has simply been a problem of supply and demand of field hands. There is little special skill, little organization, little class spirit among her working people. A tinge of paternalism, prolonged in Cuba by the late continuance of slavery and the Spanish tendency to organize commercial enterprises upon a domestic basis, pervades the relations of employer and employee. Even in urban centers the industrial characteristics of an agricultural community prevail.

The real labor supply of Cuba is inadequate to the needs of the island. It does not permit the exploitation of resources already in sight, much less does it afford a social motive for developing new industries. The intelligent people of the island appreciate this condition. They have tried to remedy it by encouraging the importation of labor from abroad. Now that their national aspirations appear to be realized, they desire that this labor shall be composed, so far as possible, of permanent settlers, who will become identified with Cuban sentiments and interests and raise the prevailing standard of intelligence and citizenship.

There is no trait more marked in the Cuban workman in every employment than his preference for contract or piece work over a regular wage. The former seems to appeal to a speculative tendency in his nature that adds interest to his occupation. It also flatters a certain sentiment of self-esteem. He feels himself more independent, more his own master in the former instance. Perhaps there is a prejudice against hired service that has come down from the days of slavery and contract labor. There are few workmen harder to drive and easier to lead than the Cubans. Whatever the reason, employers all emphasize the preference of the people for contract work.

THE COMMERCE OF CUBA

The foreign commerce of Cuba, according to the latest returns received by the Bureau of Statistics of the Department of Commerce and Labor, amounts to 200 million dollars per annum, the imports being 95 million dollars and the exports 110 millions.

There has been a steady gain in the share of the imports drawn from the United States, the share in 1894 being 39 per cent; in 1902, 42 per cent, and in 1906, 50 per cent. The share of the exports sent to the United States was, in 1894, 85 per cent; in 1902, 77 per cent, and in 1906, 87 per cent.

Of the exports, which are composed chiefly of sugar, tobacco, and fruits, nearly all of the sugar and a large proportion of the fruits are sent to the United States, and the exports of tobacco are divided between the United States and Europe.

Of the 48 million dollars' worth of imports from the United States, iron and steel manufactures amounted to practically 10 million dollars, meat and dairy products about 6 millions, flour a little over 3 millions, lumber 2½ millions, leather and its manufactures about 2 millions, cattle about 2 millions, coal a little less than 2 millions, coffee (from Porto Rico) about 1½ millions, cotton manufactures about 1½ millions, and vegetables about 1 million.

BRITISH AND AMERICAN INVESTMENTS IN CUBA

The British investment, estimating railroads at $90,000,000, shipping at $5,000,000, and real estate and industries at $5,000,000, may be approximated at $100,000,000, as against nearly $120,000,000 of American money in the island.

The oldest and most profitable railroads in Cuba are owned and operated by British capital, namely, the Western Railroad of Habana, the United Railways of Habana, and the Cuban Central Railroad, which are owned by one group, while the stocks of the United, Maria-

nao, Cardenas and Jucaro, and Matanzas railways are held by another group of London financiers. These lines form a network of communication through the west-central portion of the island, the great sugar and tobacco producing and the most fully developed and thickly populated part of Cuba, and serve Habana, Matanzas, Cardenas, Cienfuegos, Caibarien, Sagua, and Batabano. Sugar shipments constitute the bulk of the freight to the coast. Inward loads and passenger traffic are also dependent upon this staple, for the power of the rural population to purchase general merchandise and the ability of the country folk to travel over the lines is regulated by their sugar profits, direct or indirect.

The sugar crop of the four provinces traversed by these railroads has been estimated for 1906 at 7,746,800 bags. It is probably not unsafe to say that fully 80 per cent of the total, or 6,197,240 bags, were carried by the British railroad lines at an average rate of between 20 and 80 cents, or 50 cents a bag, giving an approximate annual earning of $3,098,620 from this source alone.

EXTENSION OF RAILWAY SYSTEMS

Habana, the principal port of the island, with a population of 275,000 and a total trade worth $105,025,676, of which $65,183,479 are imports and $39,842,197 exports, is served by both the Western and the United Railways. The former runs through a rich tobacco and pineapple country to Pinar del Rio. The Cuban Central connects Cienfuegos, whose imports and exports aggregate $19,367,000, with Sagua, with a like total of $6,611,000, and then with Caibarien, where foreign trade reaches $5,755,000. Other cities on the line are small in size, such as Santa Clara, Cruces, Camajuani, and Placetes. This district produces 38 per cent of the sugar output as well as a considerable tobacco crop.

The United Railways connect Habana with Matanzas, the foreign trade of which reaches $11,750,000, and also with the small cities of Batabano on the south coast, Guanajay, Guines, Regla, Jovellanos, and Guanabacoa. The company controls the Marianao suburban passenger line and the Cardenas and Jucaro Railway, the latter running through a cane and tobacco country, the principal port of which is Cardenas, where the imports and exports aggregate $12,241,459. It is stated that the United Railways interests have in addition purchased the Matanzas Railroad for $10,000,000. Matanzas is the only point at which it reaches the coast, but it connects with other roads and its inclusion in the system greatly strengthens the whole.

The Habana Electric and Habana Central are under aggressive American management, but their capitalization, including the investments represented by the Insular Railroad Company and the Cuba Electric Company, totaling $16,000,000, is to a considerable extent English and Canadian. The Habana Electric is the older company, while the Habana Central, having been organized for little over a year, is as yet in course of construction. It is hoped that when the latter is completed it will be able successfully to compete with the established roads which now handle the tobacco and sugar in Habana Province. A large proportion of the year's pineapple shipments has been made over the company's newly laid tracks, and the fruit farmers in the vicinity of Habana have been well satisfied with their treatment.

The Cuba Company, with an authorized capital of $20,000,000, is controlled by a Canadian president, Sir William Van Horne, although 80 per cent of the stock is supposed to be held in the United States. It runs from Santa Clara to Santiago, a port handling $10,771,000 in foreign trade.

The road has been hastily built, and the company, by the erection of sugar mills and special inducements to settlers, is endeavoring to develop the country in order to create its own traffic. An extension to Holguin, to connect with the Holguin and Gibara Railroad, reaching the coast at the latter place, is under construction,

and a branch has already been completed to Antilla, the port on Nipe Bay, which the company intends to make one of the most important shipping points in Cuba.

REVIEW OF AGRICULTURAL WEALTH

Cuba is essentially an agricultural country, and prior to the last war there were nearly a hundred thousand (90,960) plantations, farms, orchards, and cattle ranges, valued at 220,000,000 pesos ($200,000,000). Of manufactories there were practically none, if we except the cigar factories and the sugar mills producing raw sugar, molasses, and rum.

In early colonial days the principal industry was cattle raising, very little attention being paid to agriculture for two hundred and fifty years after the settlement of the island. The chief agricultural products of Cuba are sugar, tobacco, and fruit, and the cultivation of oranges for exportation has of late augmented. Very little more coffee is cultivated than is required for home consumption, although it was once a promising industry. The soil and climate of the eastern provinces are well adapted to the growth of the coffee berry, and it is said to equal in flavor the best coffee of the West India Islands. No doubt coffee culture will again be revived and extensively developed, and we may expect to see in Cuba a revival of the once famous "cafetales," or coffee plantations.

Fruits and vegetables of all kinds are being exported in large quantities, especially pineapples, cocoanuts, bananas, potatoes, tomatoes, etc. The Cuban potato, hitherto unknown to the world, has made its appearance in the United States markets during the last few years, and is already a dreaded rival of the once famous Bermuda tuber.

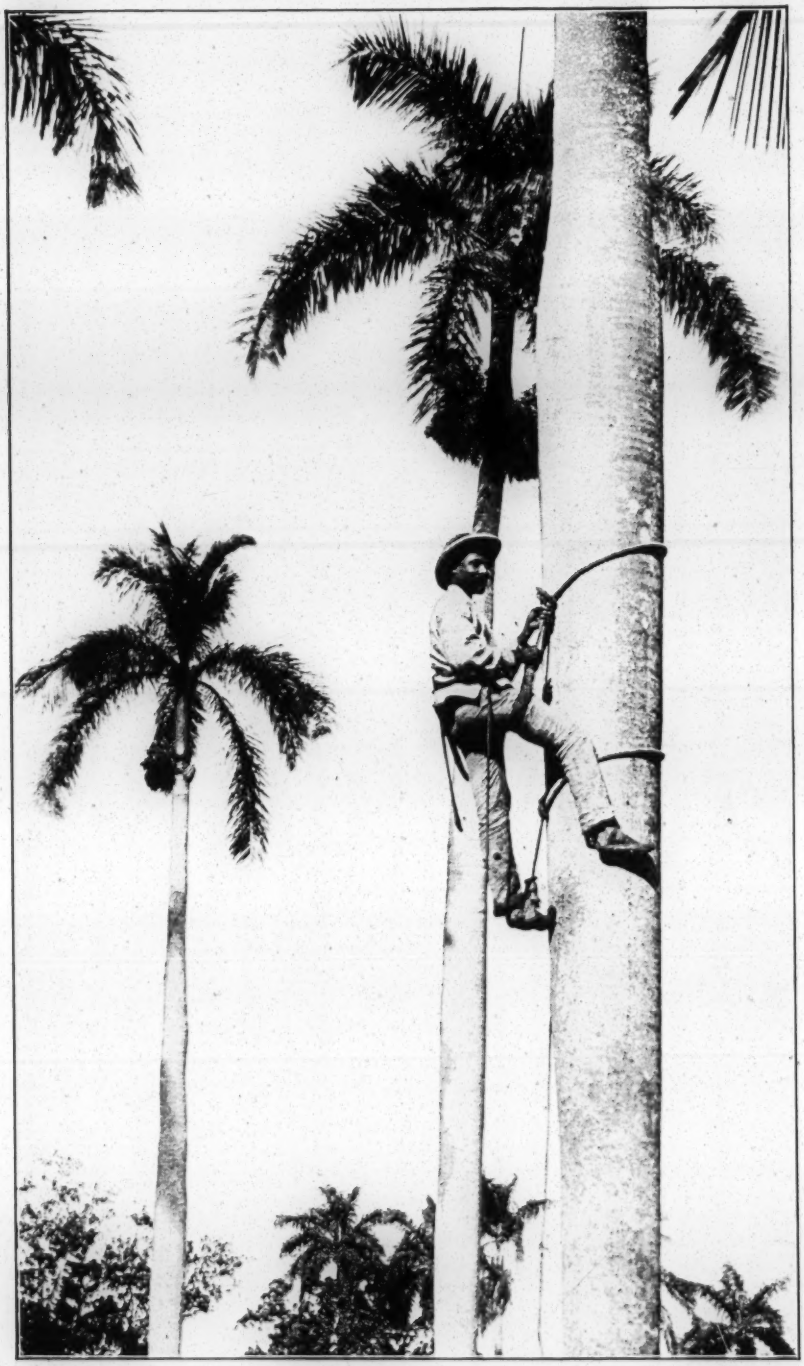
The fact that frost is unknown in Cuba, which greatly diminishes the dangers to crops, and the unquestionable excellence of the Cuban fruits and vegetables, are all-powerful factors, which will no doubt contribute toward the spreading of the Cuban fruit and vegetable trade.

THE PURPOSE OF THE PROVISIONAL GOVERNMENT AS DEFINED BY SECRETARY TAFT IN THE PROCLAMATION ESTABLISHING IT, SEPTEMBER, 1906

The provisional government hereby established will be maintained only long enough to restore order, peace, and public confidence, by direction of and in the name of the President of the United States, and then to hold such elections as may be necessary to determine on those persons upon whom the permanent government of the republic should be devolved. In so far as is consistent with the nature of a provisional government established under the authority of the United States, this will be a Cuban government, conforming with the constitution of Cuba. The Cuban flag will be hoisted as usual over the government buildings of the island; all the executive departments and provincial and municipal governments, including that of the city of Havana, will continue to be administered as under the Cuban republic; the courts will continue to administer justice, and all the laws not in their nature inapplicable by reason of the temporary and emergent character of the government will be in force.

ADDRESS OF SECRETARY TAFT AT THE OPENING OF THE UNIVERSITY OF HABANA, OCTOBER 2

I count it a peculiar honor, as representing the executive of this island, to take part in the exercises of this university. It is of special interest and an honor to me because it was my good fortune when exercising executive functions in the Philippine Islands to take part in a similar function in the university founded by the same order and under similar influences more than a hundred years before this one. Members of the Latin race, not without reason, characterize the Anglo-Saxon race as abrupt and conceited in our view of our power in pushing civilization, but those who have had occasion to come close to the Spanish race know that the Anglo-Saxon race has much to learn from the intellectual

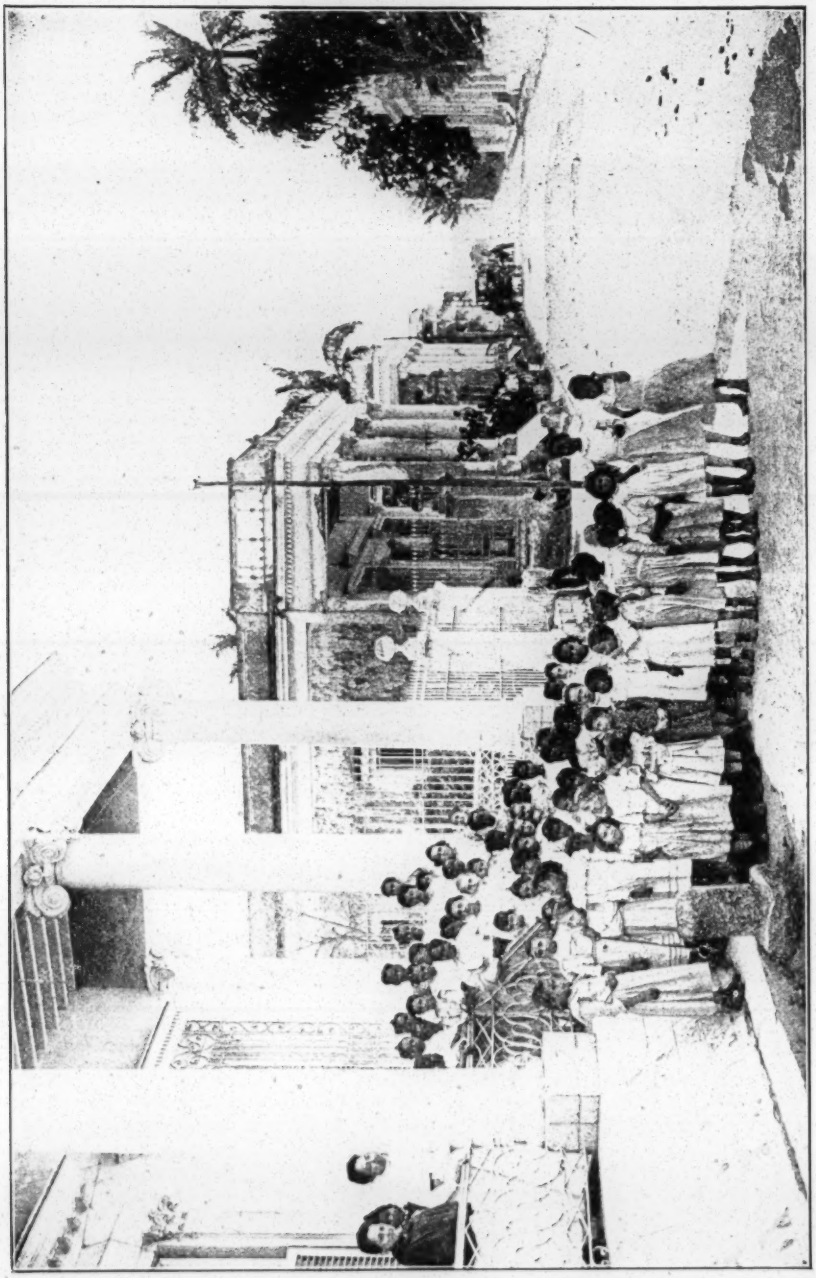


Climbing the Royal Palm

An Avenue of Royal Palms, Matanzas

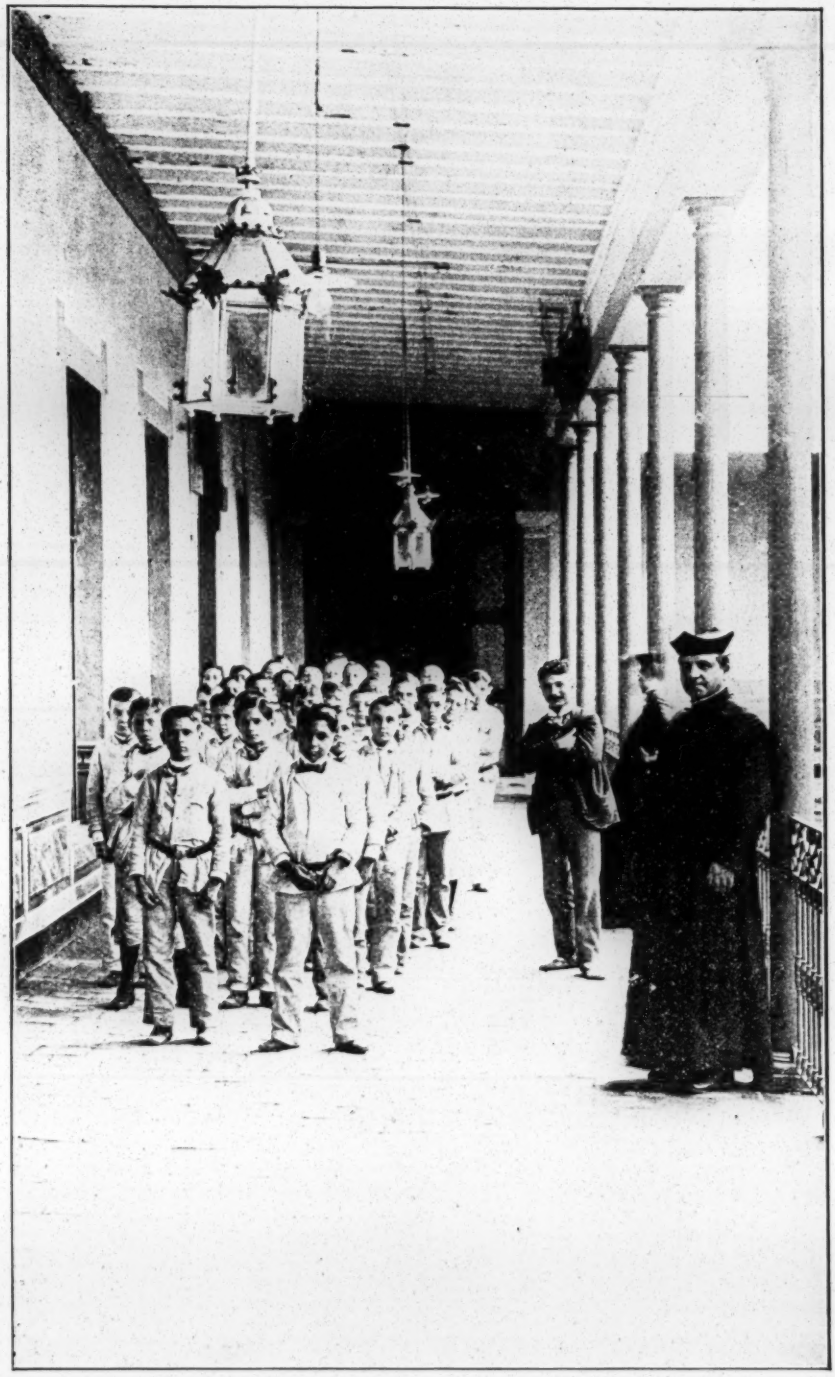
A Cocoa Grove

City of Camaguey (formerly known as Puerto Principe), a City of 25,000 Inhabitants

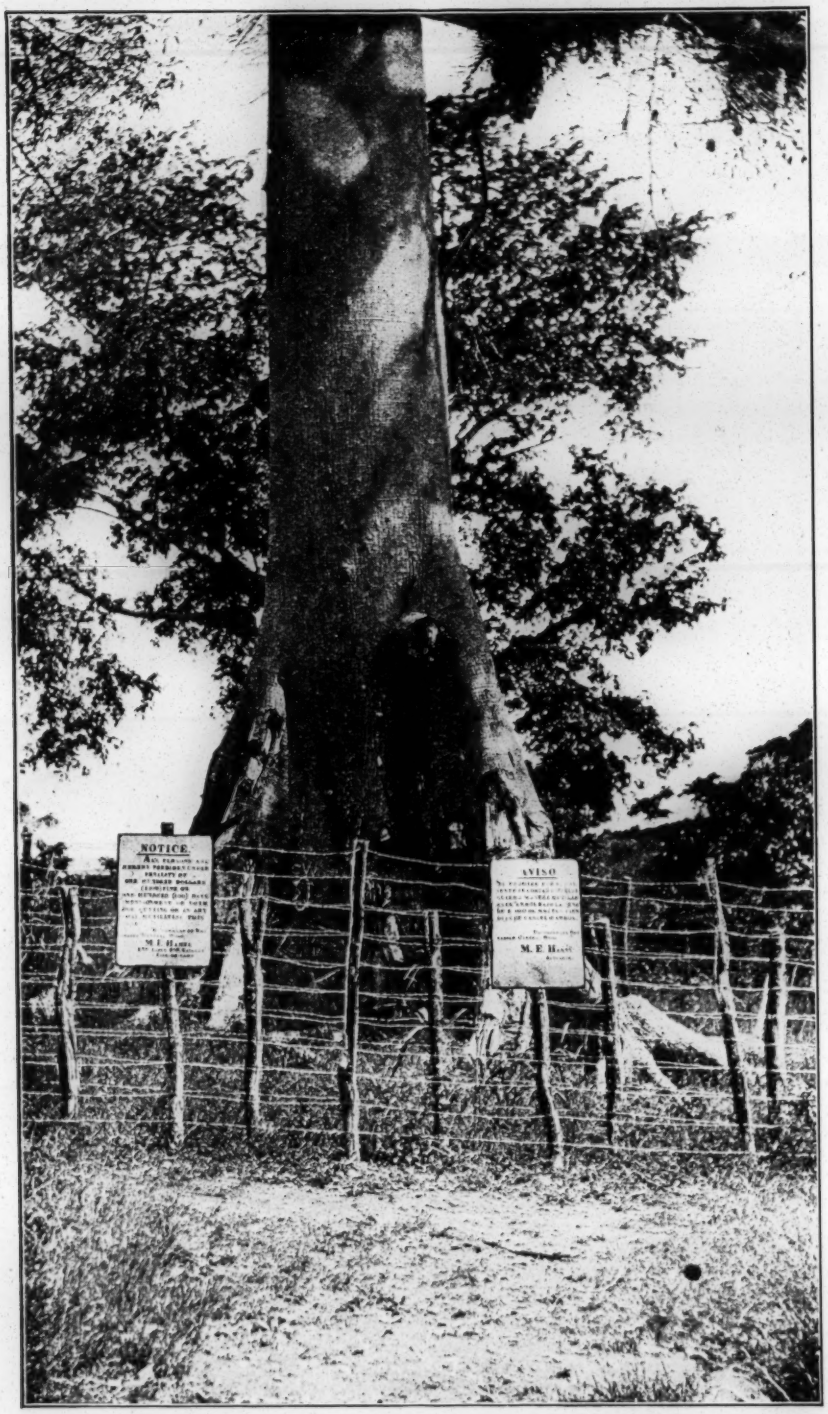


Public School, Matanzas

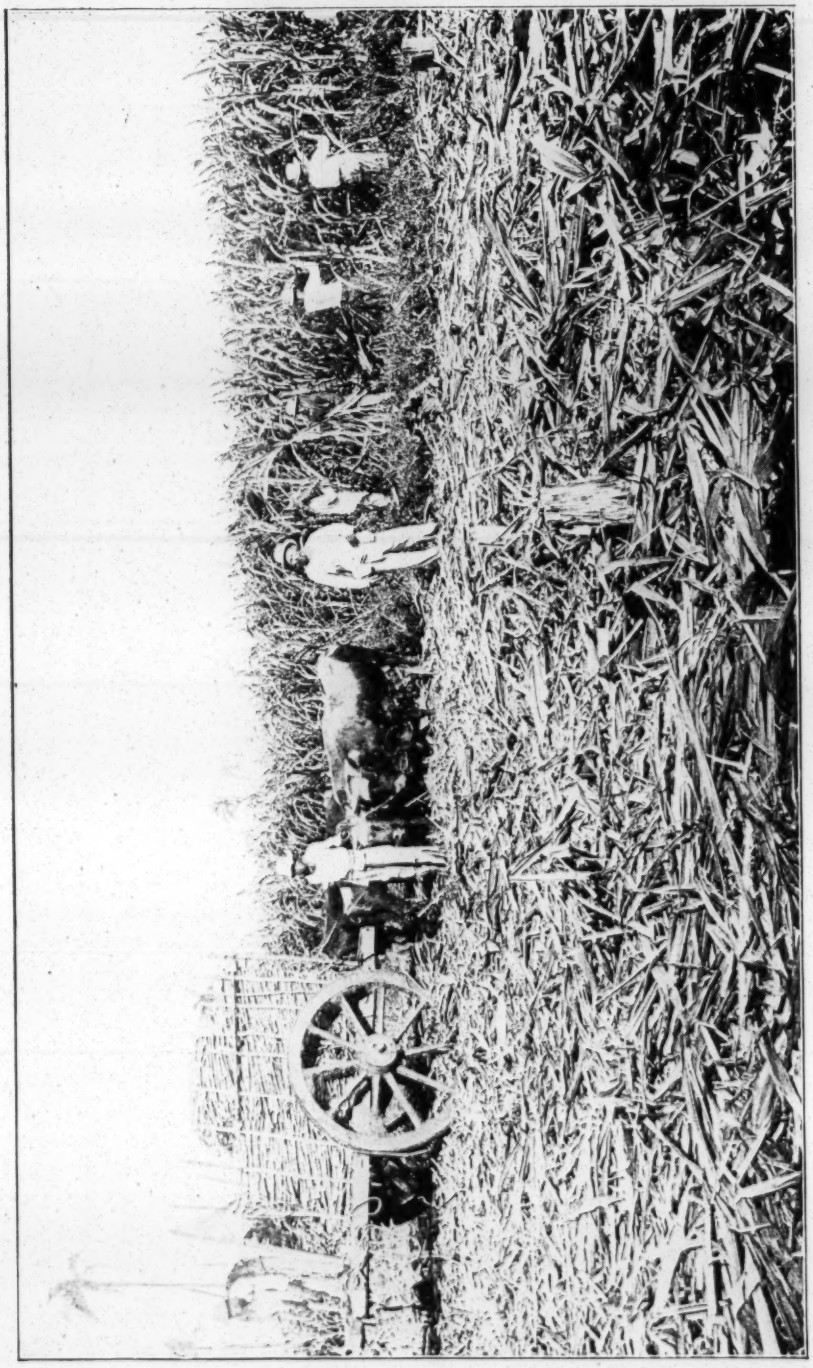
The attention the Cuban government has given to education is shown by the fact that $3,750,000, or more than 20 per cent of the general budget of the nation, is dedicated to public instruction



Class in the Corridor of the Royal College of Habana

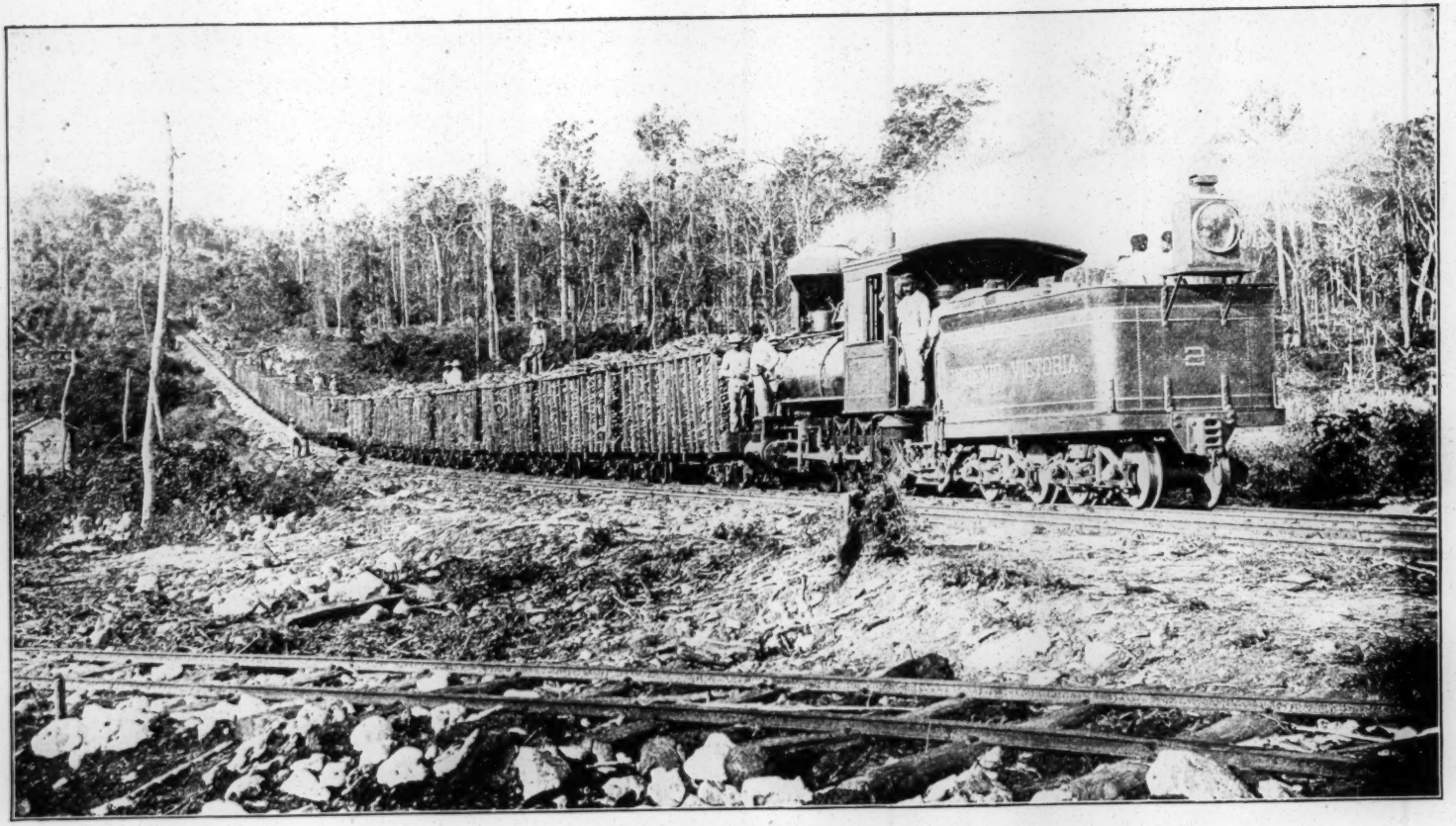


The Surrender Tree near San Juan Hill



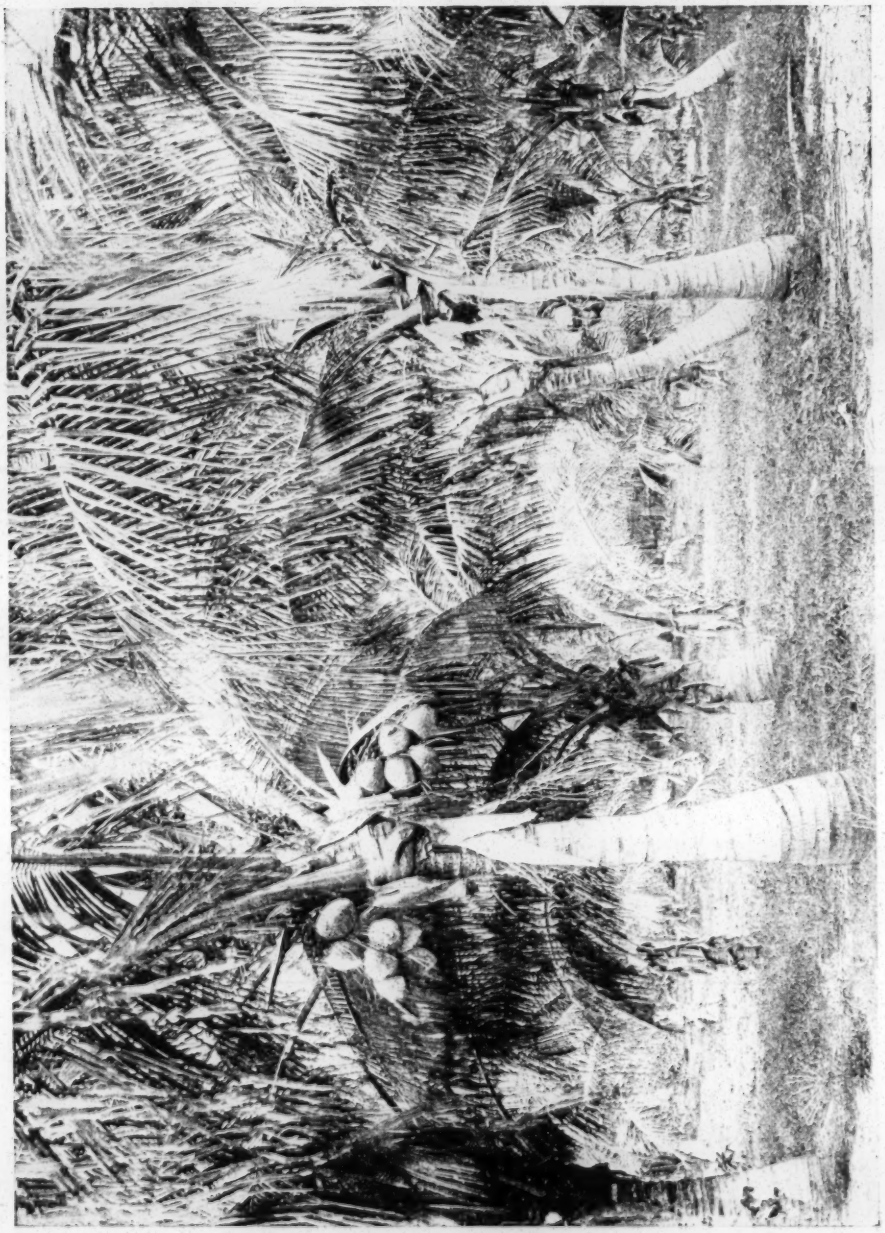
Cutting and Stripping Cane

Cuba sent the United States $60,000,000 worth of sugar cane during the year ending June 30, 1906



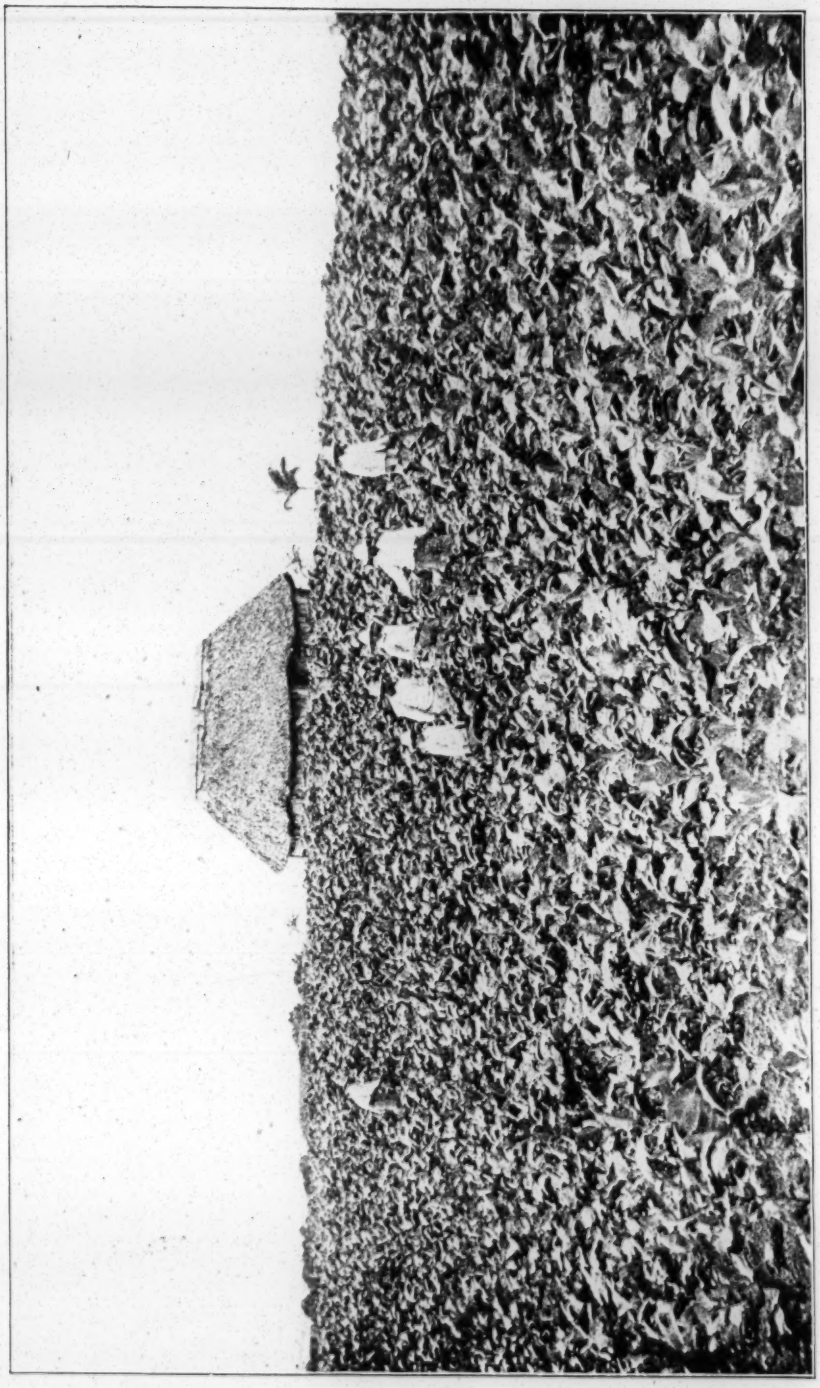
Transferring Cane to Sugar Mill

The crop of sugar cane in 1905 was about 1,100,000 tons; in 1894, just before the last revolution, it was 1,054,000 tons; in 1897, in the midst of the revolution, it was 212,000 tons



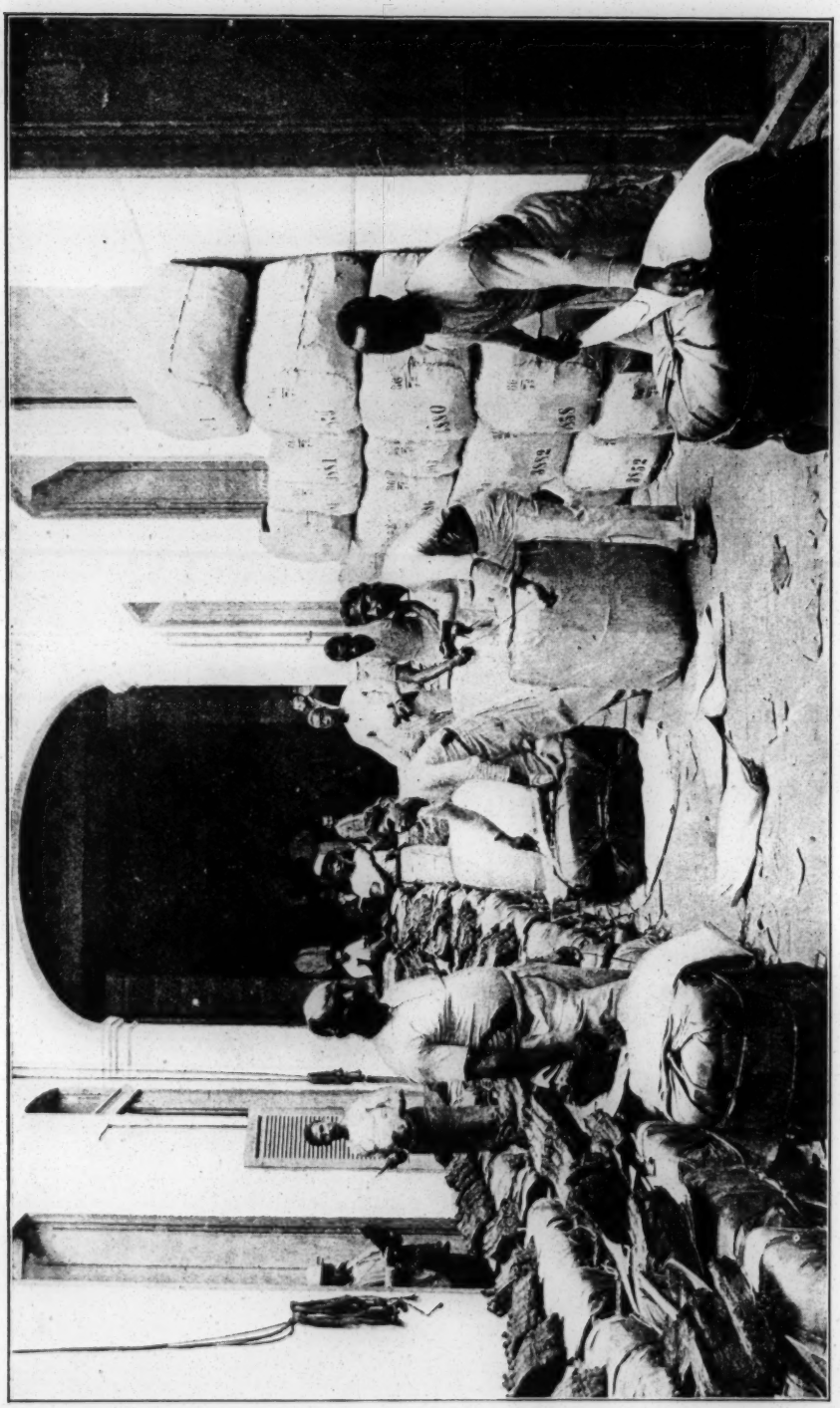
Grove of Cocoanut Trees

Ready for Picking Bananas



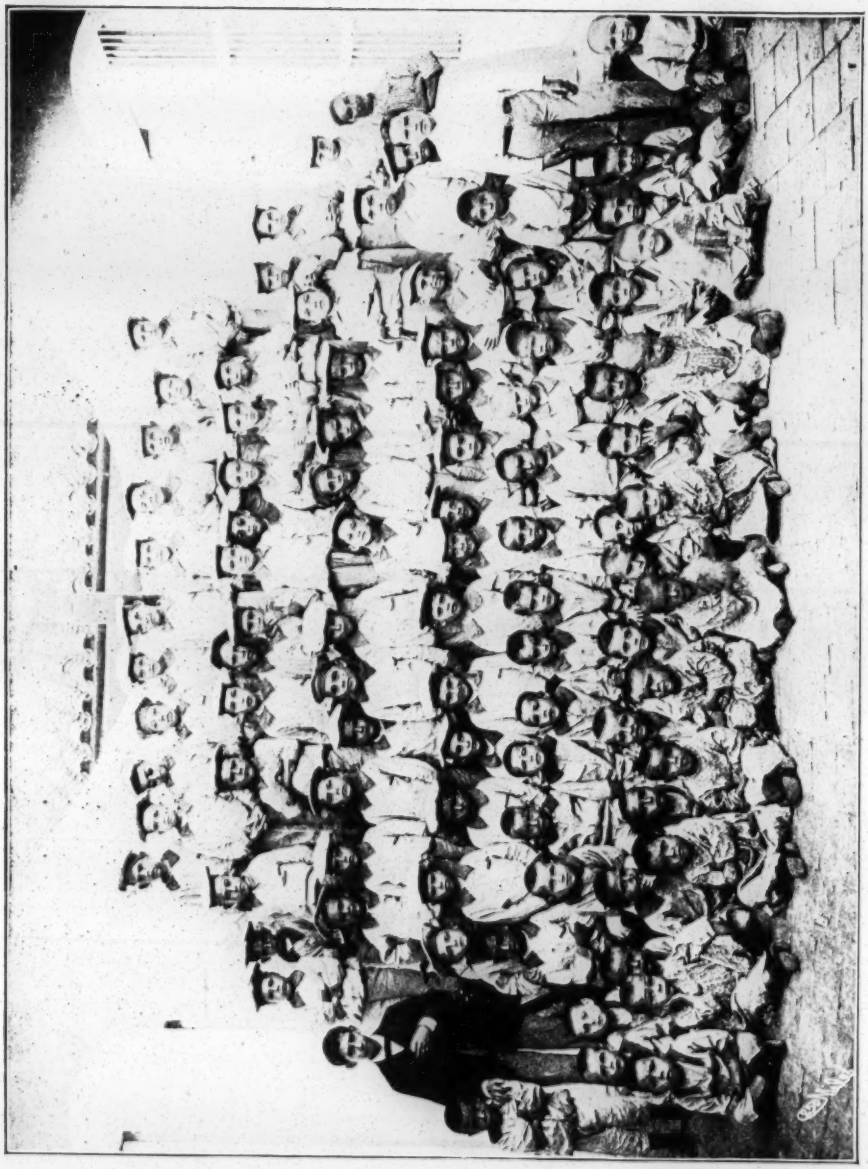
A Tobacco Plantation

In 1904 Cuba exported 205,244,000 cigars, of which 45,000,000 went to the United States, 28,390,000 to Germany, and 92,560,000 to England. In 1859 Cuba exported 250,000,000 cigars, of which 102,000,000 went to the United States

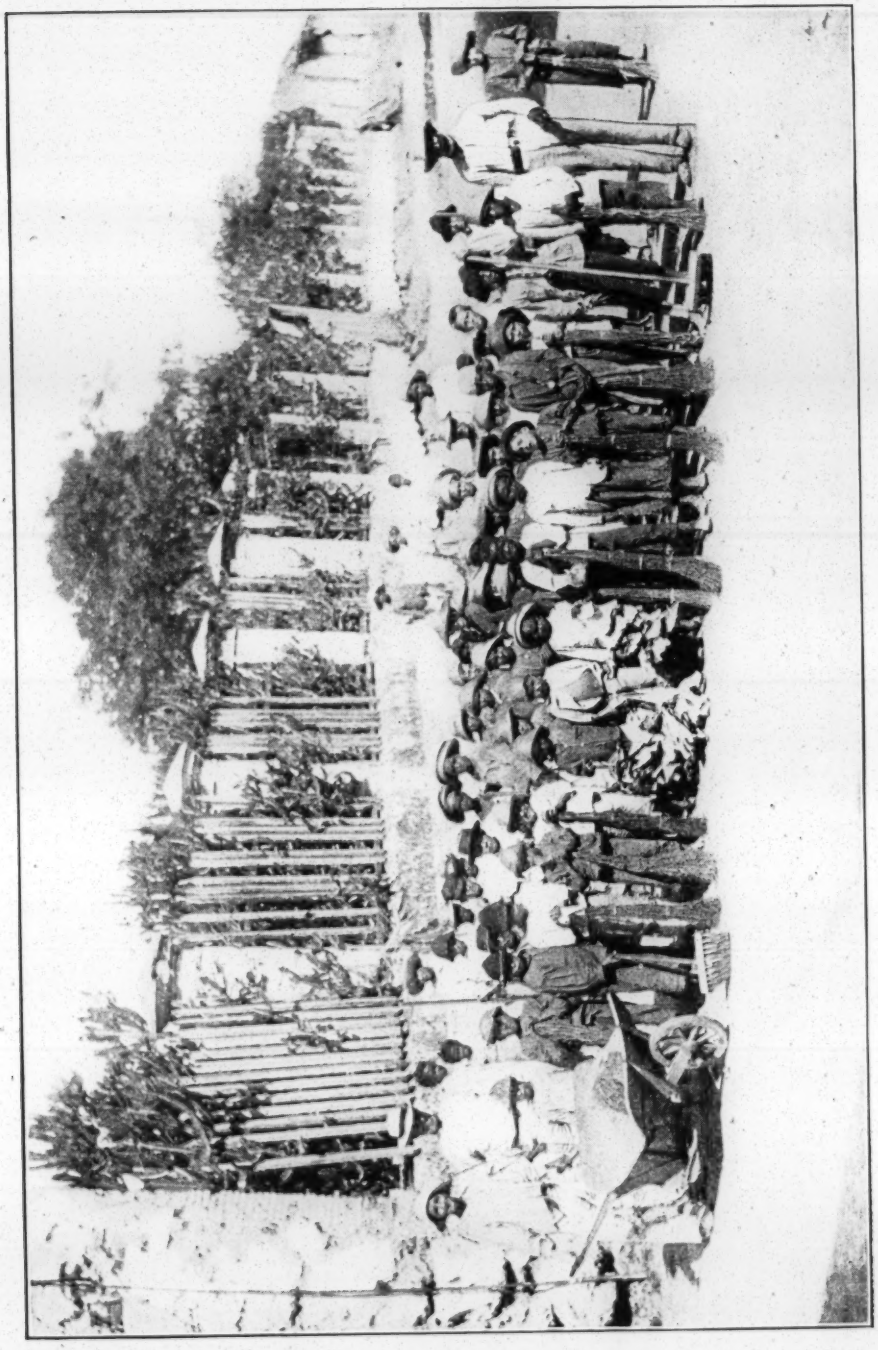


Baling Tobacco

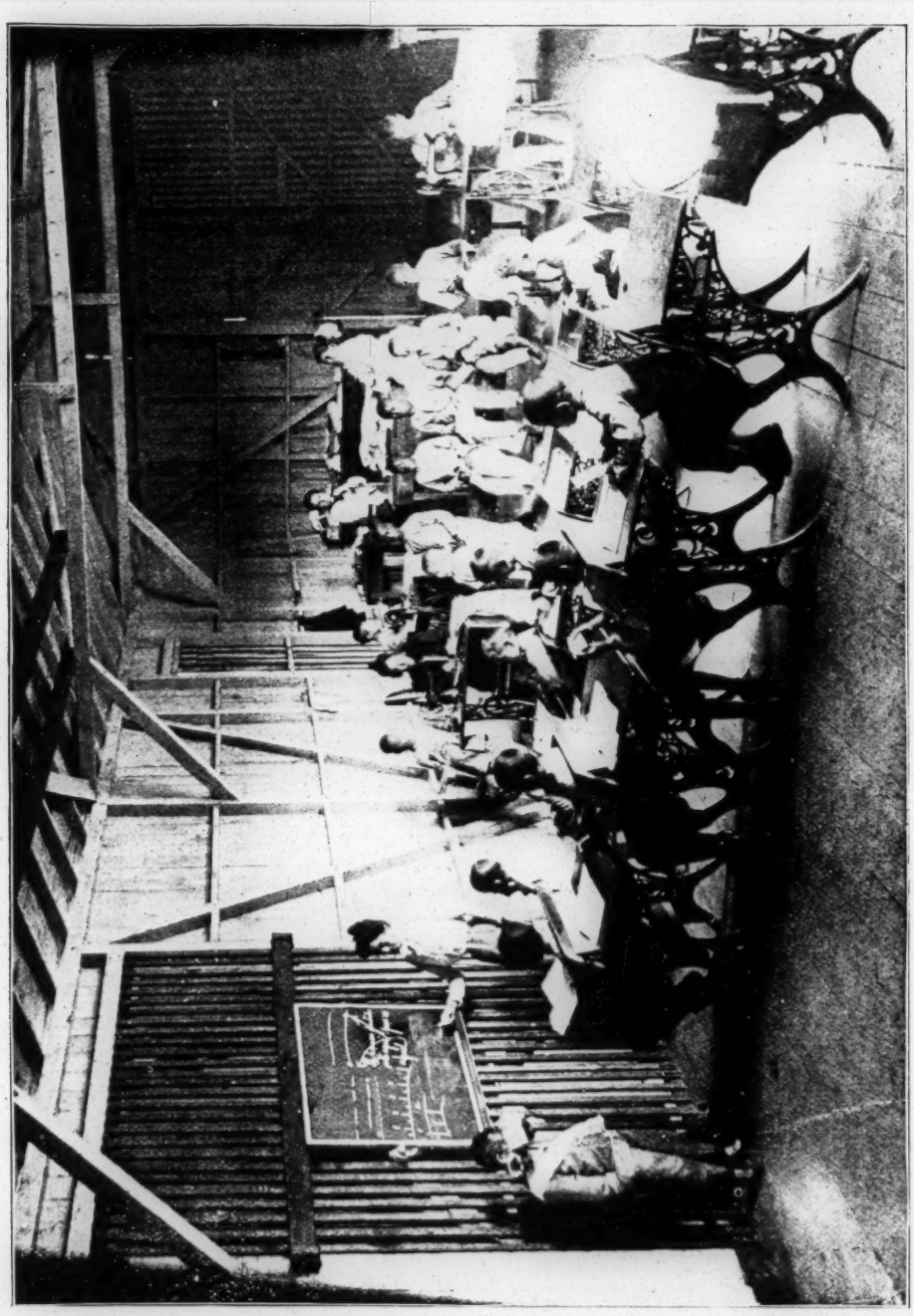
Cuba sent the United States during the year ending June 30, 1906, leaf tobacco valued at $13,500,000, and cigars and cigarettes valued at $4,000,000



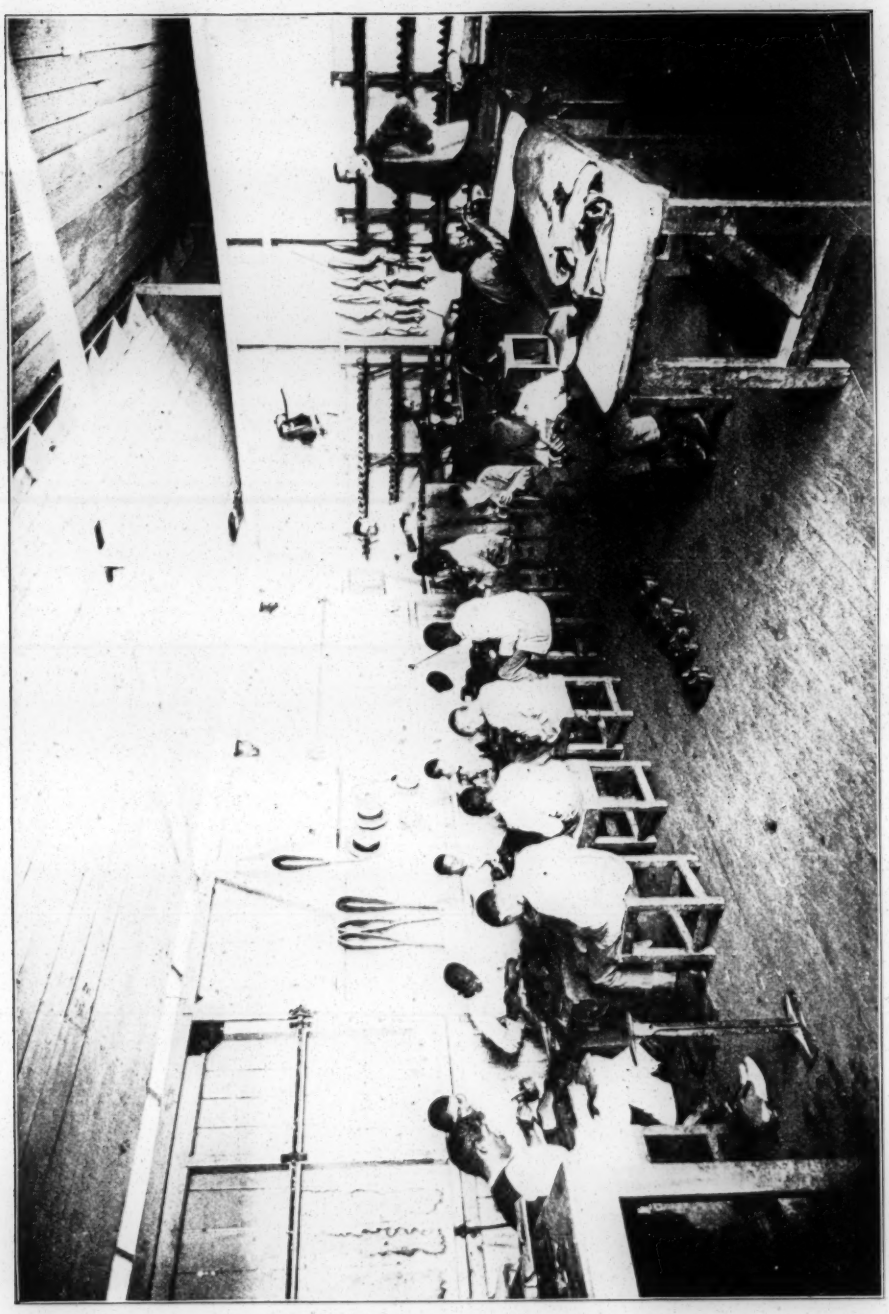
Group of Orphans, Matanzas



Destitute Children Employed in Street Cleaning at Guanabacoa

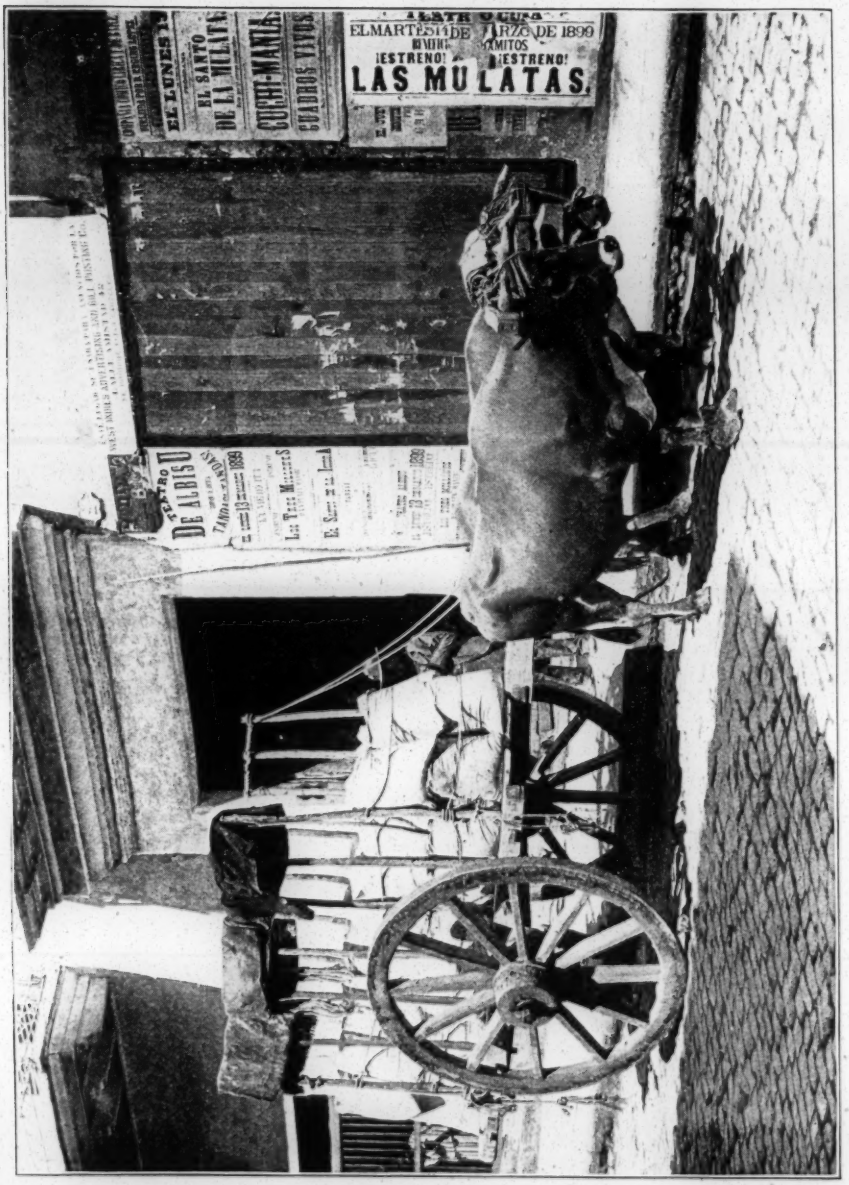


Reform School for Boys of Cuba, Guanajay, Cuba. Tailor Shop

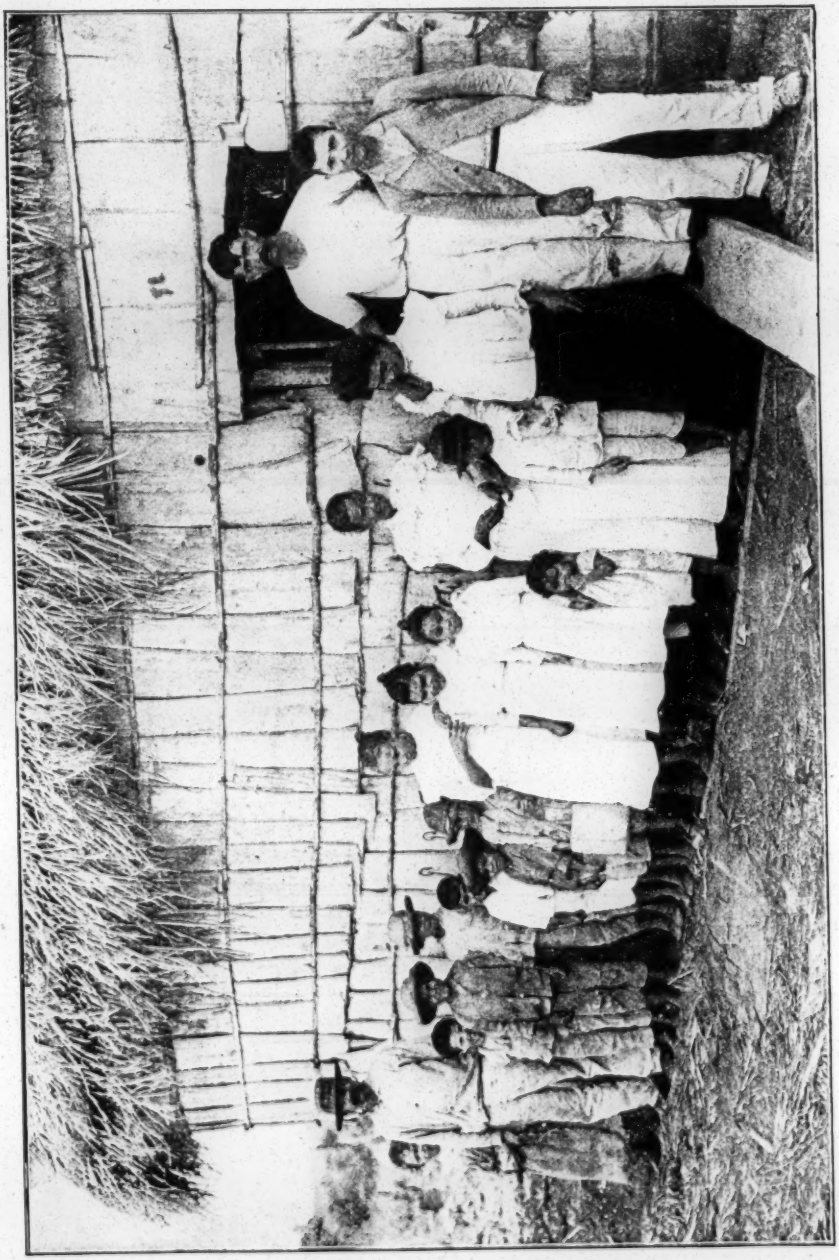


Reform School for Boys of Cuba, Guanajay, Cuba. Shoe Shop

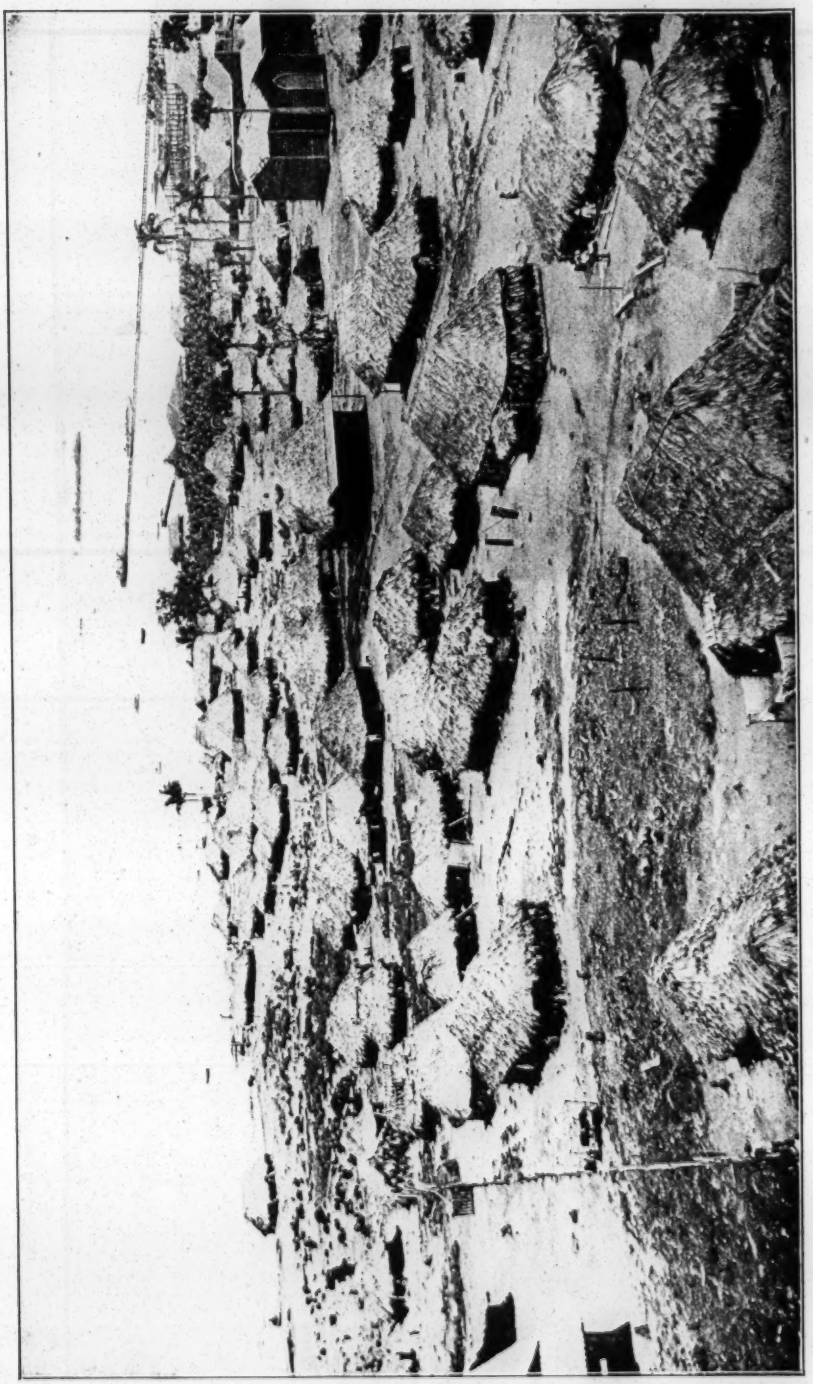
Reconcentrados, near Habana, 1898



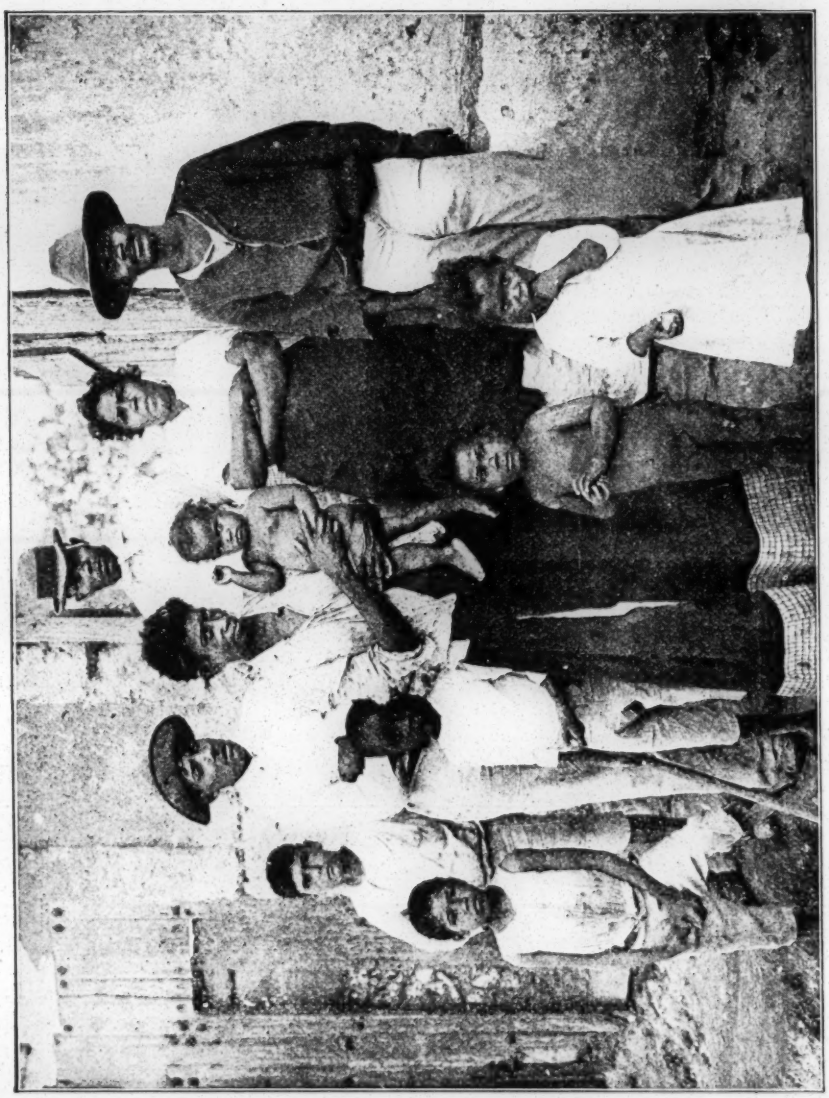
Cuban Wagon Transportation



Native White Family

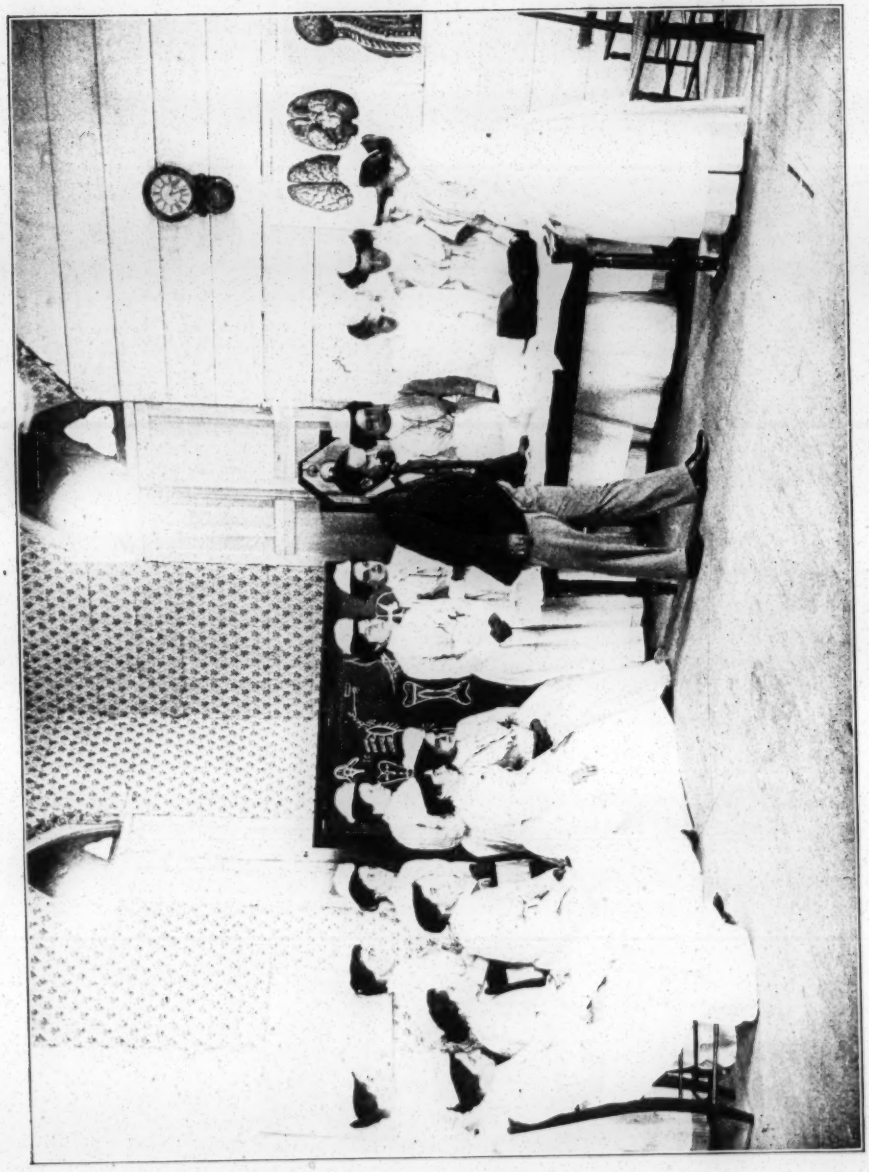


Dimas, a Village in Pinar del Rio



Native Colored Family

Reform School for Boys of Cuba, Guanajay, Cuba. Group of Boys in Habana, Sentenced to Reform School



Municipal Hospital, No. 1, Habana, Cuba. Instruction of Student Nurses in Massage

refinement, logical faculties, artistic temperament, poetic imagery, high ideals, and courtesy of the Spanish race.

THE TREMENDOUS FORCE OF SPANISH CIVILIZATION

One must know the history of these colonies to realize the tremendous force Spain exerted in civilization and progress. The great public works Spain erected the world over testify to her patience and enterprise in the centuries when the Anglo-Saxon world was struggling with something much less pretentious; but the civilization of Spain was founded on the idea of contral by one man or a few men in the state, and that idea has ceased to have force in the world. In the Anglo-Saxon world the principle was early brought to the front that those who had education enough to know what their interests were were more safely to be trusted with determining how those interests should be preserved than one man or a few men. Because in that respect and in the development of that idea we have the advantage of 200 years of education in self-government, we plume ourselves with superiority in the matter of knowledge of government.

Now we have arrived at a stage where the attention of the world is being directed toward the tropics, and along with this attention comes the movement toward popular government. Cuba, established as a republic four years ago, made such rapid progress as almost intoxicated those of us who believed in popular government. It was very much like the growth of a tropical plant that needed, possibly, to be cut back in order that the stem gain strength. It was perhaps necessary that this people should have warning, sad as the warning was, that the foundation upon which popular self-government must be laid must be broad and solid rather than high and conspicuous.

It was sad to me to be called to this island (it was still sadder to my chief, President Roosevelt, who was so identified with the liberation of this island), to be here at a time of a stumble in progress toward self-government. But, however that may be, it has given us an opportunity, which I am now glad to be able to take, to assure you in the name of President Roosevelt and the American people that we are here only to help you on, with our arm under your arm, lifting you again on the path of wonderful progress you have traveled.

I am confident that we will be able again to point with pride to the fact that the United States is not an exploiting nation, but only has such deep sympathy with the progress of popular government as to be willing to expend its blood and treasure in making the spread of such government in the world successful.

ALL CLASSES MUST TAKE AN INTEREST IN POLITICS

Your difficulty was that you were brought up under the fifteenth and sixteenth century ideas of government, the government of one man or a few men, and that you were taught to look to somebody else for the responsibility of government. You exercised only the function of criticism, and most of your people, especially those of the wealthy and educated classes, trained themselves to occupy a position not of indifference but of inactivity with reference to political and governmental matters.

Now it seems I find here a relic, although the reasons for it have disappeared, of that condition, and I find the law committed one class to medicine, left another class to commercial interests, a third class to political matters. I venture to suggest that all classes did not take an active part and insist upon exerting their influence in politics.

The question naturally arises, What was the necessity for changing your form of government? The theory of popular government is that all classes shall exercise decided political influence. Now I have discovered, it seems to me, that your ideals were too high, so high as to reach beyond the real. Ideals so high that they are beyond the reach of the real are not

very useful. Soaring in the blue ethereal without knowledge of the ground beneath is dangerous. The higher you go the more disastrous the fall, as a distinguished speaker of the day said.

The hope of this country is in the generous, educated youth who are graduating from this and other institutions. Now, I do not want to say anything that is going to deter these young men, and yet I must speak the truth. There are one or two traditions that still persist in this civilization, the first of which is that the learned professions are the only pursuits worthy of the graduates of universities and of educated men. This is a great mistake.

In the first place, a university education is not an obstruction to success in commercial and mercantile life. I am afraid the young Cubans coming forward are not sufficiently infused with the mercantile spirit, of which we have too much in America. What you need here among the Cubans is a desire to make money, to found great enterprises to carry on the prosperity of this beautiful island, and young Cubans ought, most of them, to begin in business. In the next generation the banks, commercial houses, and shipping interests of this country should be in Cuban hands, not those of foreigners.

It is quite true that in order to develop Cuba you must have foreign capital, and a profound debt of gratitude this country owes to that great man, Tomas Estrada Palma. He realized more than any of the Cuban people the necessity for bringing capital into the island.

But the coming of foreign capital is not at all inconsistent with the gradual acquirement of capital by industrious, intelligent and energetic Cubans. Therefore I urge upon the young men who are going out into life today that they devote their attention, if they have estates, to the betterment of those estates, and upon the others, who have no estates, that they get into commercial houses and commercial pursuits, so that when twenty-five years hence sympathetic strangers come here they will not find the governing or political class, the commercial class, and the class representing the sciences and professions all different and divided.

It gives me great pleasure in saying this much to you, and I wish to thank the rector of the university and the faculty. I have only to say, be not discouraged. No one ever achieved a high ideal without failing two or three times. The only way to make failures successes is to make those failures a vehicle leading on to success. Take to your hearts the lesson that each stumble, each failure, ought to teach, and the next time avoid that particular danger. When everything is smooth, when the winds blow the right way, when you seem on the high road, then is the most dangerous time. It is when humbled by the lesson taught by disappointment that you win success. I thank you.

Viva la Republica de Cuba.

The immigration into Cuba has increased very rapidly. In 1902 it was 11,898; in 1903, 17,844; in 1904, 28,467; and in 1905, 54,221. The figures do not include colonists and settlers from the United States who are not classed as immigrants and of whom no statistics are kept. About 87 per cent of the immigrants, or 48,000, in 1905 were from Spain. The number of Americans in Cuba, excluding the Isle of Pines, probably does not exceed 6,000. Of the $120,000,000 of United States money invested in Cuba, probably one-half is in sugar and tobacco, one-fourth in railroads and street railways, and the balance in real estate, mortgages, mines, commercial interests, and fruit culture.

OSTRICH FARMING IN THE UNITED STATES

OSTRICH farming in the United States, while still in its infancy, is becoming a profitable industry in Arizona and California, and it is believed that in a few years we shall not be obliged to import ostrich feathers from abroad. Mr Watson Pickrell, in the last yearbook of the Department of Agriculture, gives an exceedingly interesting account of the growth of this industry, from which the facts in this article are derived.

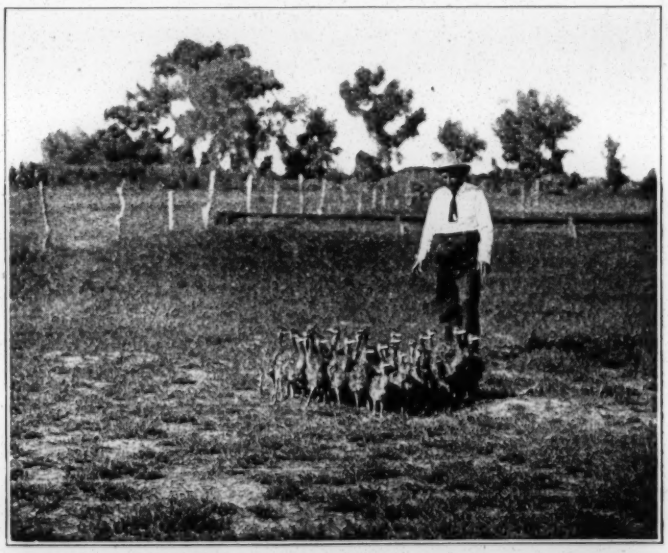
More than half the ostriches now in the United States are the progeny of a single pair owned in Arizona in 1891. Great progress has been made in the last five years, and there are now 2,500 ostriches on farms in the United States. Of these, 1,740 are in Arizona and the remainder in California, Florida, and Arkansas.

Where good alfalfa pasture has been available, the birds bred in America have grown larger than those first imported. A full-grown fat ostrich will weigh from 375 to 450 pounds. He will stand 8 feet high, but can easily reach to a height of 10 or 11 feet.

Ostriches thrive best in a warm, dry climate, but can be grown in any part of the southern states and territories of this country. In a moist climate they should have protection from cold and rain.

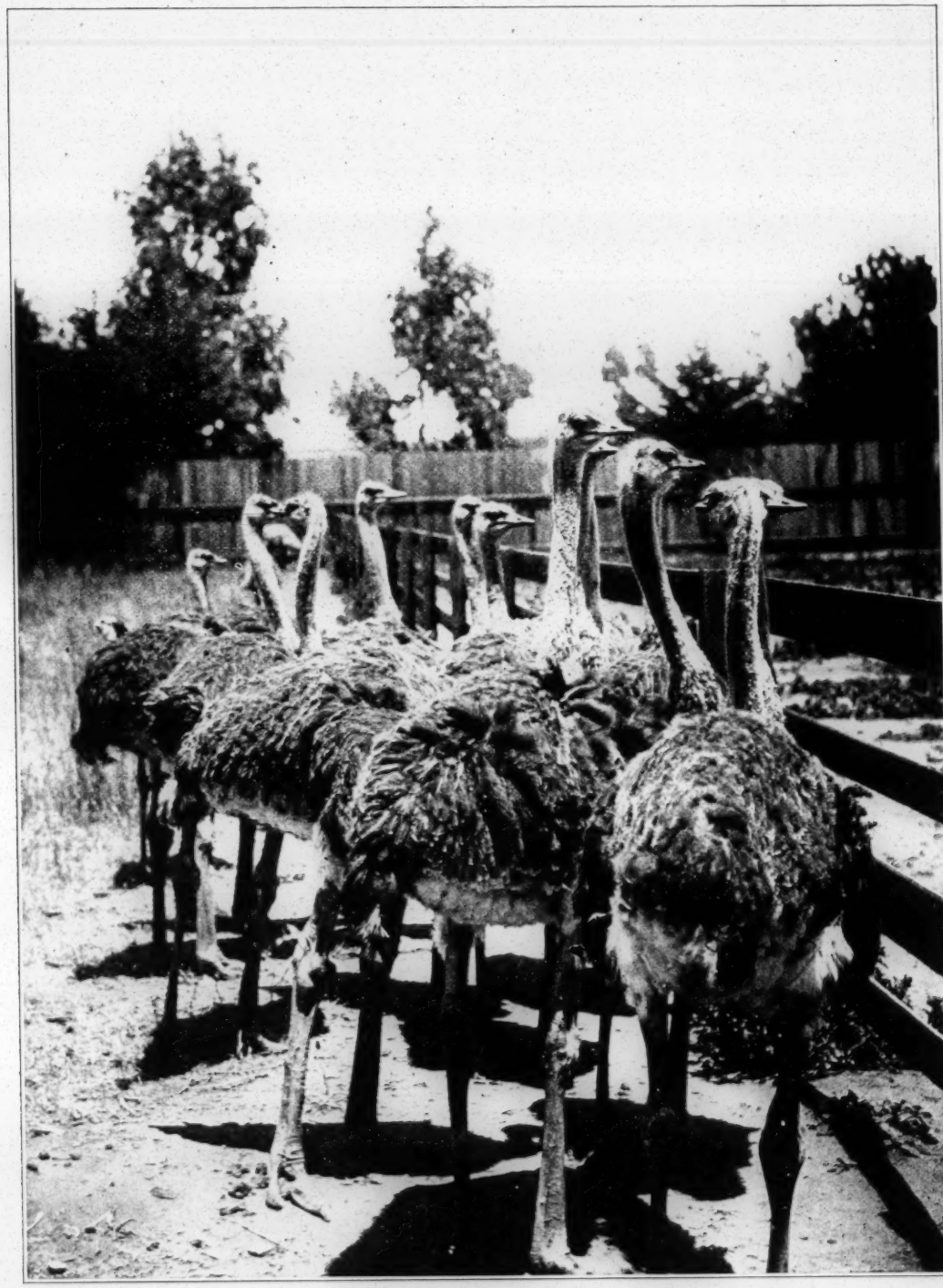
Ostriches come to maturity when about four years of age. The female matures from six months to a year before the male, but she will seldom lay a fertile egg until she is 3½ years old. The nest is a round hole in the ground, which the male scoops out with his feet. At first the female may not take the nest, but may lay her first eggs on the ground; whereupon the male will roll them into the nest. Generally, after the male has put 3 or 4 eggs in the nest, the female will lay there. In about 30 days she will lay 12 to 16 eggs, and will be ready to commence incubation. Incubation takes 42 days. Any good, well regulated incubator can be successfully used, provided it is constructed on a large enough scale to accommodate ostrich eggs, which are 5 inches in diameter and 7 inches long.

The ostrich is plucked the first time when six months old, and should be plucked about every eight months thereafter during its lifetime. The only feathers removed are those of the wing and tail. The process of plucking consists in cutting the tail feathers and one row of the largest quill feathers in the wing with pruning shears, and drawing by the hand those of the remaining two or three rows in the wing. Two months later the

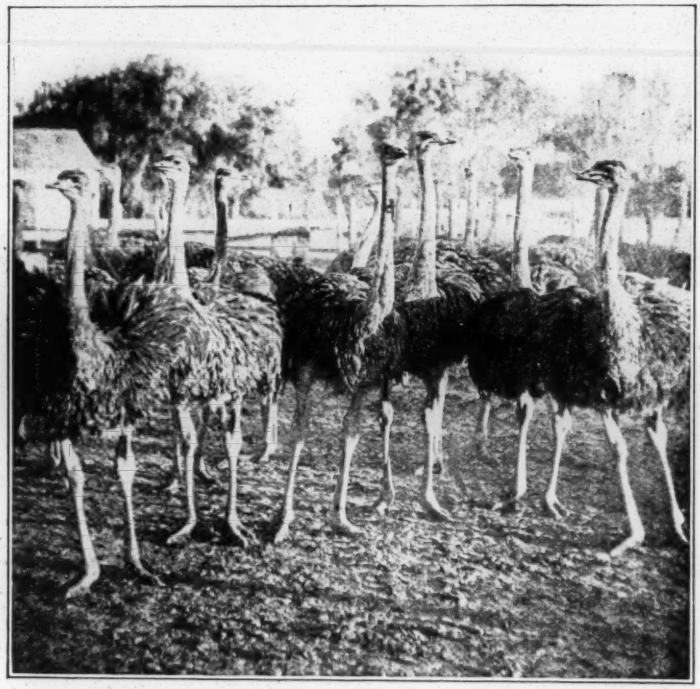


From Watson Pickrell, U. S. Department of Agriculture

Ostriches 5 Days Old, Salt River Valley, Arizona



Young Ostriches, South Pasadena, California



From Watson Pickrell, U. S. Department of Agriculture.

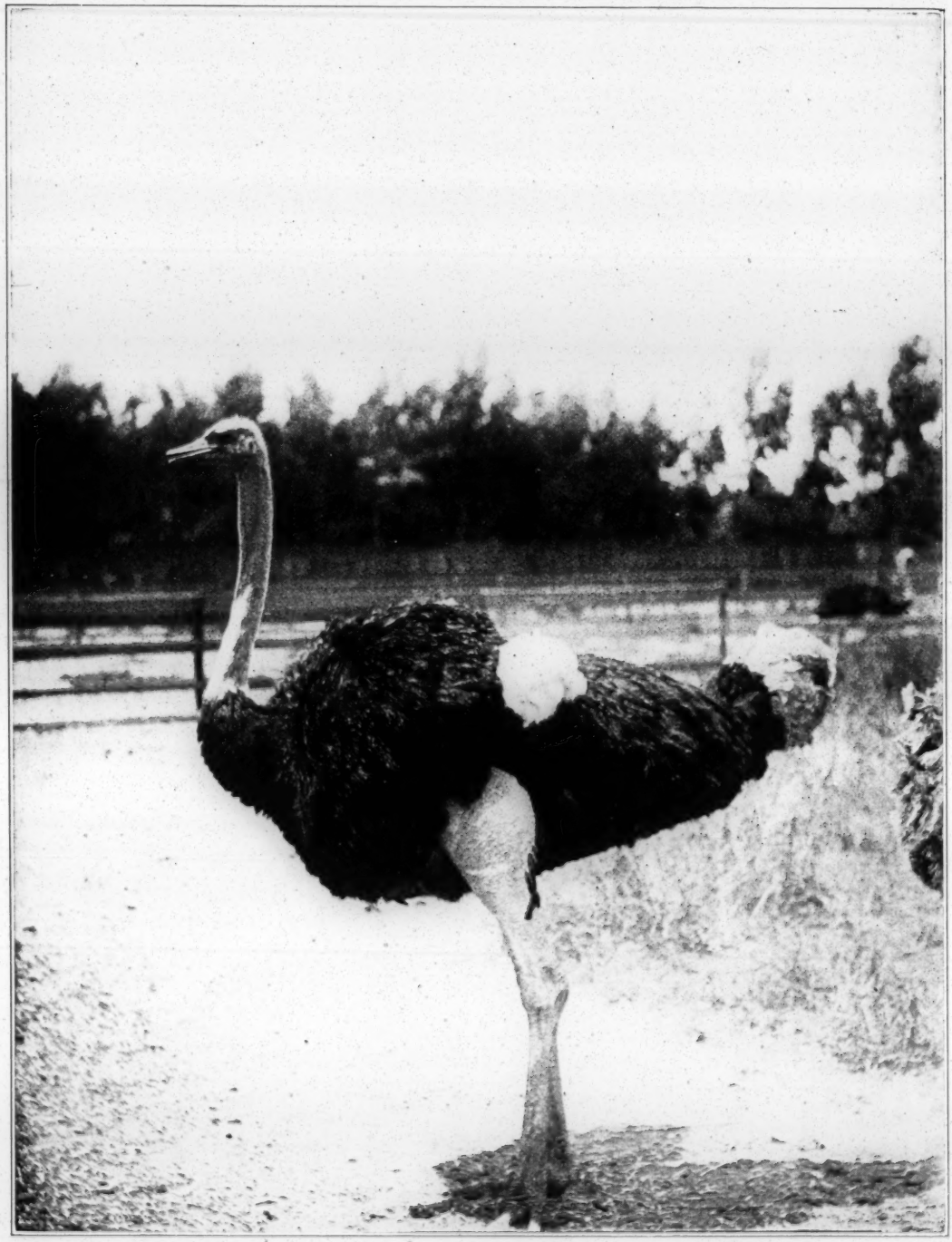
Ostriches 5 Months Old, Salt River Valley, Arizona

quills of the cut feathers may be removed. At plucking time the ostriches are driven in from the pasture and placed in a small pen surrounded by a tight board fence 5 or 6 feet high. The plucking box is about 4 feet high, 20 inches wide, and 3½ feet long, open at one end and closed with a door at the other. An ostrich is caught and a hood placed over its head. The hooded bird is very easily handled. It is placed in the plucking box with its head next to the closed door. The plucker stands behind the bird while removing the feathers. This is necessary, because the ostrich can kick or strike very hard, but it always strikes out in front and never behind, so that the plucker is perfectly safe if he stands in the rear.

In sorting, the feathers of the male, being more valuable, are kept separate from those of the female.

The United States is one of the largest consumers of ostrich feathers in the world. During the fiscal year 1903-'4 there was imported into this country $2,292,515 worth of "raw" or "unmanufactured" feathers. The feathers produced in America are fully as good as those coming from Africa, and it is claimed that they are broader and finer looking, though some of the manufacturers contend that they are not as strong and tough as the wild feathers. There seems to be no reason why ostrich farming may not be developed sufficiently in Arizona and California alone to supply all the feathers consumed in America.

Young ostriches are usually kept in troops of 25 to 50. When they are one year old the males should be separated from the females. When they are 3½ years old the birds should be paired off, each pair being placed in a separate inclosure, which, in case the birds are to graze on alfalfa or other green food, should be large enough to furnish them sufficient food. If they are fed on dry



Full Grown Bird at Ostrich Farm, South Pasadena, California

From Watson Pickrell, U. S. Department of Agriculture

Plucking an Ostrich, Salt River Valley, Arizona

feed the inclosure need only be large enough to allow plenty of exercise.

Ostriches are easily removed from one field to another by one person going ahead, calling them, and leading them on with grain, while another follows on a horse. The birds are very timid and do not like to be driven unless some one goes ahead of them.

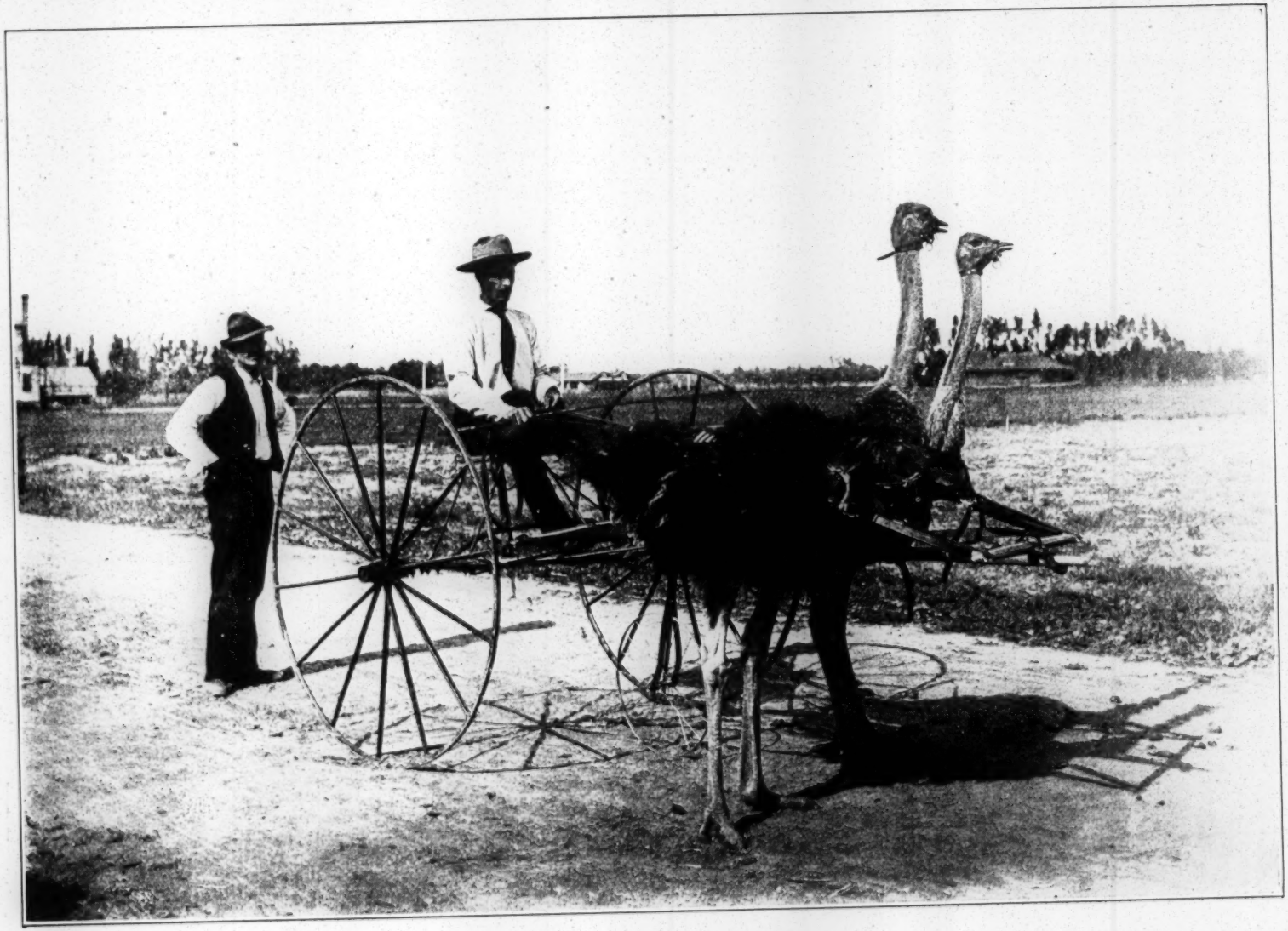
After ostriches are over one year old no one should go among them without a brush or stick in the hand, as at times they will want to fight, and a person going among them is liable to injury unless he has something with which to drive or frighten them away.

Although African writers assert that ostriches will live without water, Arizona farmers find that they drink water freely every day if it is supplied to them.

Nothing is positively known as to how long an ostrich will live. Some writers claim that it will live one hundred years. Ostriches which are known to have been in captivity for forty years are still breeding and producing feathers. It is the experience of Arizona farmers that among birds having good nutritious green feed deaths seldom occur, except as the result of an accident. A dog or other small animal will sometimes frighten ostriches and cause them to run into the fence, which may result in a broken leg. When this happens the bird may as well be killed, as few ever recover from such an injury.

Chicks 6 months old may be set down as worth $100 each; 1-year-old birds, $150; 2-year-old birds, $200 to $250; birds 3 years of age, $300 to $350, and birds 4 years old, the age which they pair, $800 or more per pair.

An ostrich will yield annually 1½ pounds of feathers, with an average value of $20 a pound, and from 36 to 90 eggs, which may be used for incubation or may furnish egg food at the rate of 3½ pounds to the egg, if the owner does not wish to increase his troop.



At Los Angeles, California

THE PASSING OF KOREA*

HOMER B. HULBERT, for many years resident of Korea and editor of the *Korean Review*, is the author of a new book, entitled "The Passing of Korea," published this month by Messrs Doubleday, Page & Co., of New York. It is undoubtedly the most reliable and interesting volume on this people that has been issued in many years. Mr Hulbert sympathizes very deeply with the Koreans in their loss of independence, and feels that they have been harshly treated by the Japanese. Unquestionably it is a sad fact when a nation forfeits its independence, but this must occasionally happen in the progress of the world. While many will differ from Mr Hulbert in his judgment as to the justice of the Japanese advance through Korea, every one must admire the sympathetic and eloquent manner in which he outlines the history and describes the manners, customs, and personality of the country, and will profit by as well as greatly enjoy the reading of the book. Through the courtesy of the publishers, the NATIONAL GEOGRAPHIC MAGAZINE is enabled to republish several of the striking and typical illustrations from the volume, and to give the following extracts:

There is a peculiar pathos in the extinction of a nation. Especially is this true when the nation is one whose history stretches back into the dim centuries until it becomes lost in a labyrinth of myth and legend—a nation which has played an important part in the moulding of other nations and which is filled with monuments of past achievements. Kija, the founder of Korean civilization, flourished before the reign of David in Jerusalem. In the fifth century after Christ, Korea enjoyed a high degree of civilization and was the repository from which the half-savage tribes of Japan drew their first impetus toward culture.

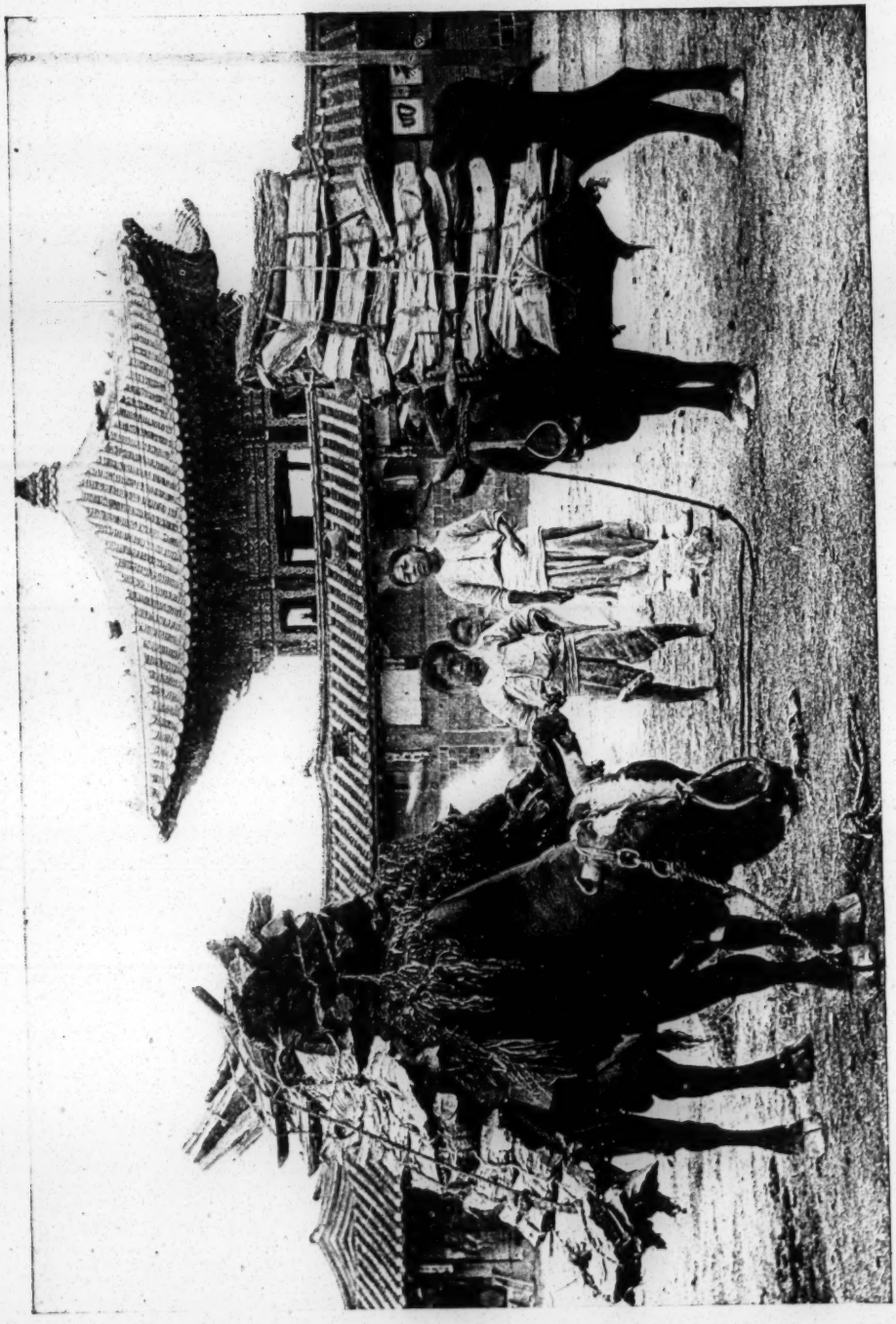
The American public has been persistently told that the Korean people are a degenerate and contemptible nation, incapable of better things, intellectually inferior, and better off under Japanese rule than independent. The following pages may in some measure answer these charges, which have been put forth for a specific purpose—a purpose that came to full fruition on the night of November 17, 1905, when, at the point of the sword, Korea was forced to acquiesce "voluntarily" in the virtual destruction of her independence once for all.

Topographically Korea lies with her face toward China and her back toward Japan. This has had much to do in determining the history of the country. Through all the centuries she has set her face toward the west, and never once, though under the lash of foreign invasion and threatened extinction, has she ever swerved from her allegiance to her Chinese ideal. Lacordaire said of Ireland that she has remained "free by the soul." So it may be said of Korea, that, although forced into Japan's arms, she has remained "Chinese by the soul."

The scenery of Korea as witnessed from the deck of a steamer is very uninviting, and it is this which has sent so many travelers home to assert that this country is a barren, treeless waste. There is no doubt that the scarcity of timber along most of the beaten highways of Korea is a certain blemish, though there are trees in moderate number everywhere; but this very absence of extensive forests gives to the scenery a grandeur and repose which is not to be found in Japanese scenery. The lofty crags that lift their heads three thousand feet into the air and almost overhang the city of Seoul are Alpine in their grandeur.

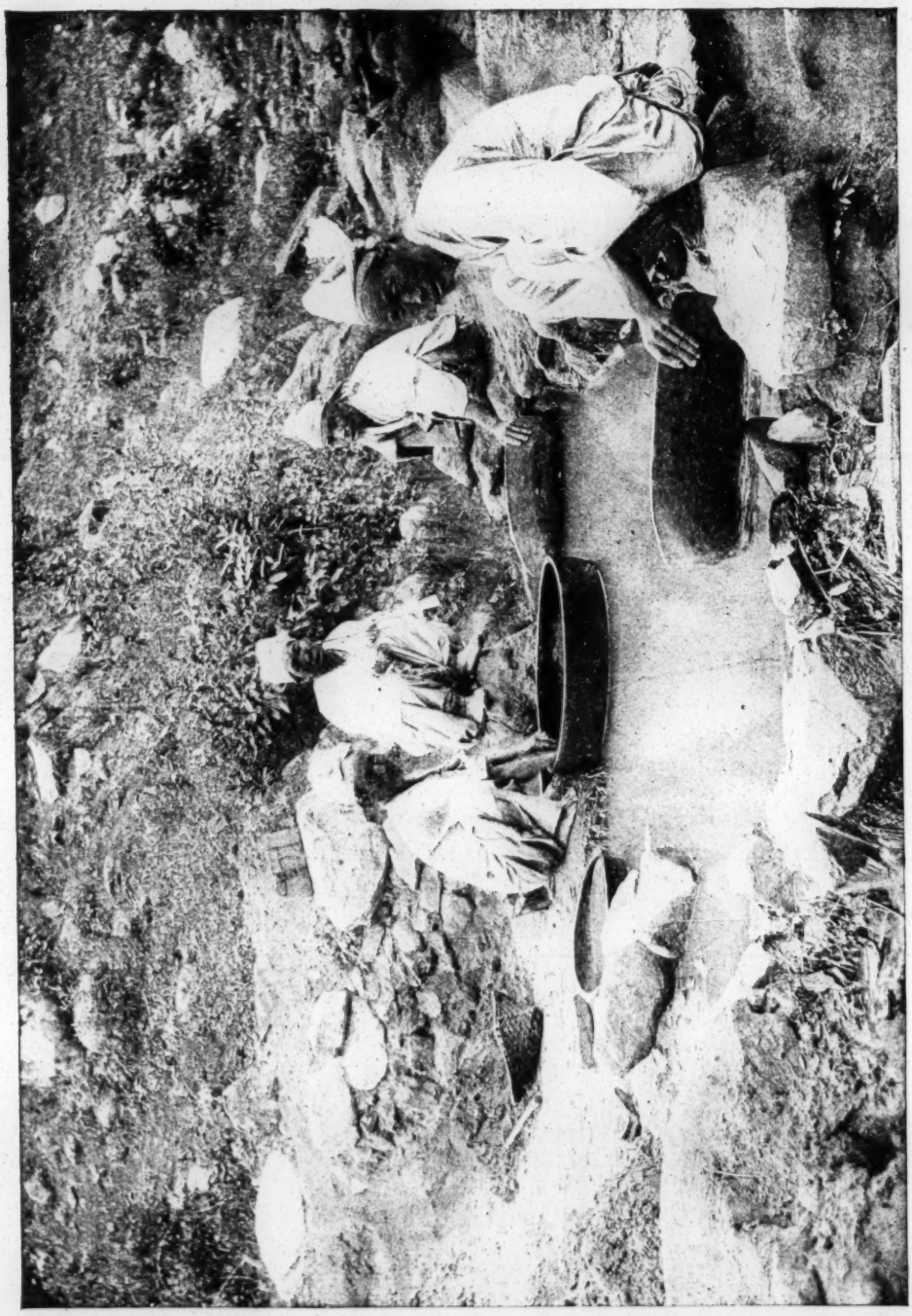
The vegetable life of Korea is like that of other parts of the temperate zone,

* "The Passing of Korea." By Homer B. Hulbert. Profusely illustrated from photographs. Pp. 475. 7½ by 10½ inches. New York: Doubleday, Page & Co. 1906. $4.18, postpaid.



From Hulbert's "The Passing of Korea." Copyright, 1906, by Doubleday, Page & Co.

The Faithful Fuel-carriers of Korea



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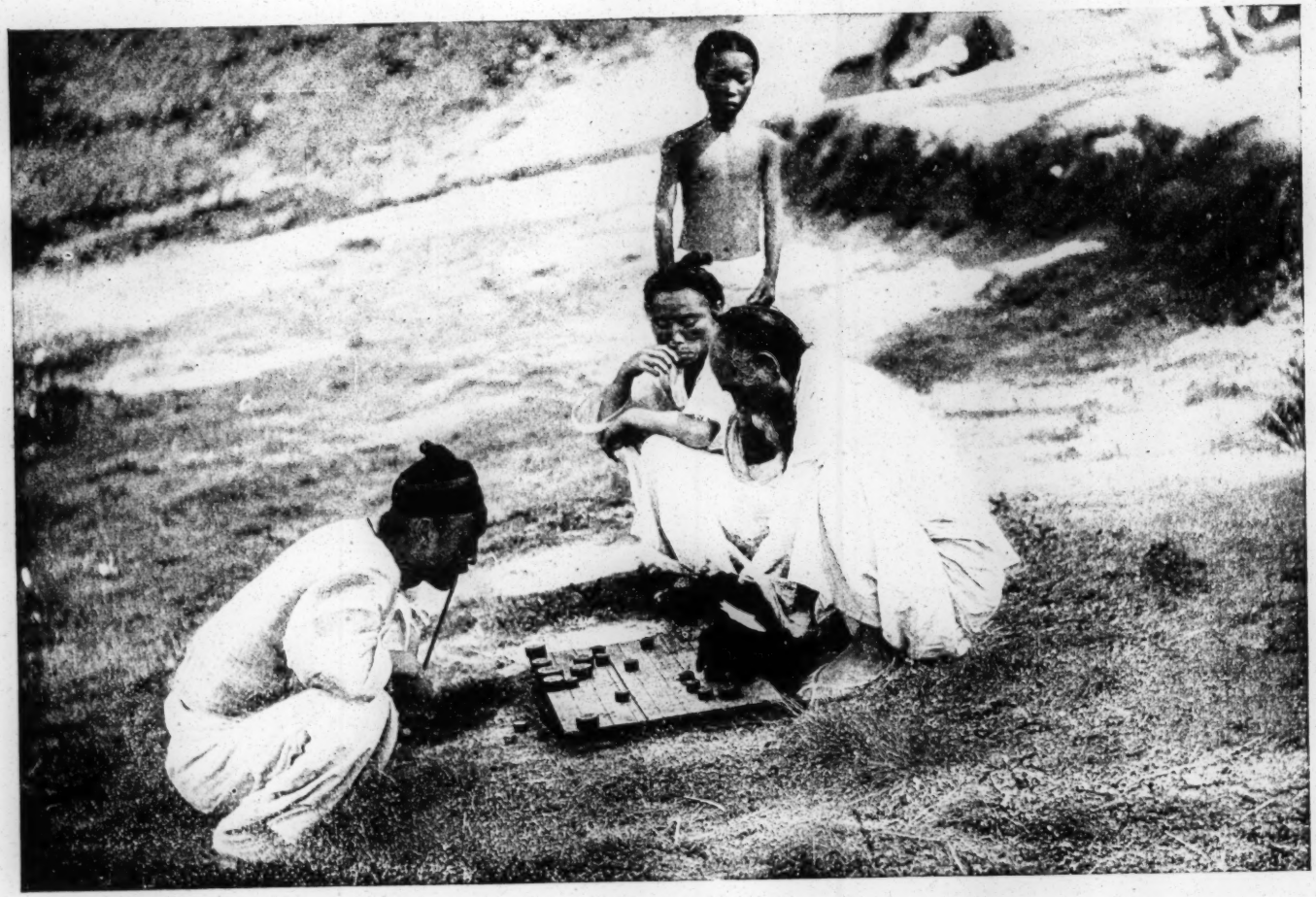
Placer Gold Mining in Korea

From Hulbert's "The Passing of Korea." Copyright, 1906, by Doubleday, Page & Co.

Boys Who Gather Grass for Fuel—Dead Child Tied to Tree



From Hulbert's "The Passing of Korea." Copyright, 1906, by Doubleday, Page & Co.

An Interesting Chess Problem

but there is a striking preponderance of almost every kind common to the temperate zone, with the exception of the apple.

The Koreans are great lovers of flowers, though comparatively few have the means to indulge this taste.

As for animal life, Korea has a generous share. The magnificent bullocks which carry the heavy loads, draw the carts, and pull the plows are the most conspicuous. It is singular that the Koreans have never used milk or any of its products, though the cow has existed in the peninsula for at least thirty-five hundred years. This is one of the proofs that the Koreans have never been a nomadic people. Without his bullock the farmer would be all at sea. No other animal would be able to drag the plow through the adhesive mud of a paddy field. Great mortality among cattle, due to pleuro-pneumonia, not infrequently becomes the main cause of a famine. There are no oxen in Korea. Most of the work is done with bullocks, which are governed by a ring through the nose and are seldom obstreperous. Every road in Korea is rendered picturesque by long lines of bullocks carrying on their backs huge loads of fuel in the shape of grass, fagots of wood, or else fat bags of rice and barley.

Korea produces no sheep.

Reputable language is hardly adequate to the description of the Korean dog; no family would be complete without one; but its bravery varies inversely as the square of its vermin, which is calculable in no known terms.

The Koreans differ from the Japanese in that, while the latter keep themselves warm by the use of heavy blankets, and in winter are most frequently seen crouched about their charcoal braziers, the Korean heats his house generously and depends upon his hot stone floor for comfort. The effect, while perhaps no better from a hygienic standpoint, is decidedly more comfortable. It is also much more costly. People have wondered why Korea looks so barren compared with Japan. The reason lies right here: Koreans keep their wood cut down to the quick, to provide themselves with fuel, while the Japanese let the forests grow.

The only way by which the Koreans will be able to preserve their nationality, says Mr Hulbert, is education. The Koreans have awakened to the fact that this, which should have been their first consideration many years ago, is now their last resort, and they are clamoring for education.

RUSSIA'S WHEAT SURPLUS

SOME interesting facts are given about the Russian peasants and the agrarian question in a bulletin recently issued by the Department of Agriculture, entitled "Russia's Wheat Surplus." The report was prepared by Dr I. M. Rubinow and is one of a series dealing with the competitors of the United States in agricultural products.

The Russian wheat crop has increased from 400,000,000 bushels in 1896–1898 to 630,000,000 bushels in 1902–1904. The wheat area is over 10,000,000 acres larger than that of the United States, and in 1903 and 1904 the Russian crop exceeded the crop of this country.

Nevertheless, the crop is small when the acreage is considered, the average yield of wheat per acre in Russia being the lowest of all important wheat-growing countries. In European Russia it varied within the last twenty-three years from 5 to 11 bushels per acre. Nine times out of the twenty-three years it was below 8 bushels. If the Russian peasant obtained as good a yield as the German peasant, the wheat crop of European Russia alone would amount to

From Hulbert's "The Passing of Korea." Copyright, 1906, by Doubleday, Page & Co.

Woman's Correct Street Costume in Korea

1,300,000,000 instead of 400,000,000 bushels.

In the western part of Russia, in the Baltic provinces, Poland, and the southwestern region, the yield is considerably higher—between 15 and 20 bushels per acre; but New Russia and the Lower Volga region, often called the granary of Europe, show a yield normally fluctuating between 8 and 6 bushels and often dropping to 5.

The explanation for such low yields must be sought in Russian agricultural methods as well as the system of land ownership, which dates back to the emancipation of the peasants in 1861, when they were granted small lots out of the estates to which they belonged. The greatest share of the land remained in the hands of the large-estate holders, while three-fourths of the peasants received less than 16 acres per male person, or less than 40 acres per family. At the same time the noblemen's estates were so large that 924 families owned 74,000,000 acres of land. Since the emancipation era the peasants have been largely buying land from the noblemen, having acquired in this way over 50,000,000 acres; but notwithstanding this, the normal increase of population has been such that from 1861 to 1896 the average land holding of the peasants per family decreased 20 per cent.

This system of petty land holdings, combined with the ignorance of the peasants, has caused the survival of very primitive and inefficient agricultural methods. Throughout Russia the peasants get a much smaller yield than the large-estate holders, and the difference is especially great for winter wheat, reaching 3 bushels, or 25 per cent of the yield of the large estates; moreover, the difference is growing larger. In New Russia, for instance, the yield of spring wheat on peasant lands in four out of the last nine years fell below 5 bushels per acre.

The communal ownership of the peasants' lands, which exists in four-fifths of rural Russia, has also interfered materially with agricultural progress by the ever-present danger of redistribution and consequent lack of security of ownership.

There are reasons for these low yields besides the unavoidable climatic conditions. Among these is the insufficient use of fertilizers or manure in the wheat region, due to communal ownership of peasants' lands and to deficient live stock and lack of pasture on the peasants' lands. Thus the number of horses in Russia has not increased during the last twenty years, and from one-third to one-half of the peasants in the various wheat provinces have no horses at all. The implements used are extremely poor and primitive. Even the plows are made mostly of wood, and scarcely scratch the exhausted superficial layers of the soil. The all-iron plow is still a luxury for many peasants. Scythes and sickles are still used extensively for harvesting and flails for thrashing. Seeders are scarcely known. Conditions are somewhat more favorable on the larger holdings of the noblemen; among the peasants the kind of machinery directly depends upon the size of the peasant's lot. Importation of complex agricultural machinery has grown from $2,600,000 in value in 1890 to $14,200,000 in 1903, but it has affected the farming on large estates more than that of the peasants.

Even on the large estates the modern implements are not generally used, since it is often customary to hire the peasant with his live stock and his crude implements. Laborers are hired for $30 to $40 a year in addition to their food, the cost of which does not exceed $25, and a female agricultural laborer receives only $12 to $20 a year. Even at harvest time the average wages of a man with a horse in the wheat belt are only 66 cents per day, of a man alone 34 cents without board, and of a female worker 22 cents. At other times the wages are correspondingly lower.

Nevertheless, the cost of producing wheat in Russia is not as low as one might imagine. Elaborate investigations have shown that because of the low yield

the average cost per bushel of spring wheat in 1899–1903 was 36 cents in Middle Volga, 39 cents in Lower Volga, and 48 cents in New Russia, not including land rent, which has been constantly rising during the last twenty years, because of the intense demand of peasants for more land.

Within twenty years the value of land in the wheat belt has risen from $10 to $30 per acre, and wheat land rents for $3 and $4 an acre, which adds a charge of from 20 to 50 cents per bushel, depending on the yield. With the rent added, the cost of production of wheat rises to 55 to 80 cents per bushel.

The future of wheat production in Russia depends largely upon economic conditions and the educational progress of the Russian peasants. Forty years ago the Russian peasantry was uniformly illiterate. According to the census of 1897, 35 per cent of the adult male peasants were literate, and in the younger generation the proportion of literacy was still higher.

Bread cereals have always been the mainstay of Russian agriculture. They claim over 75 per cent of all cultivated land in Russia, as against 20 per cent in the United States; but forty years ago the share of wheat in Russia was small in comparison with that of rye, the Russian staple. Since the Russian land tiller began to produce for the foreign market, the strong demand for wheat has had its effect. During the last twenty-five years the acreage under rye in European Russia has remained about 65,000,000 acres, while the acreage under wheat has increased from 29,000,000 to 46,000,000. Taking the entire Russian Empire, the acreage under rye has increased from 70,000,000 acres in 1894 to 74,000,000 acres in 1904, while that under wheat has increased from 41,600,000 to 59,200,000 acres.

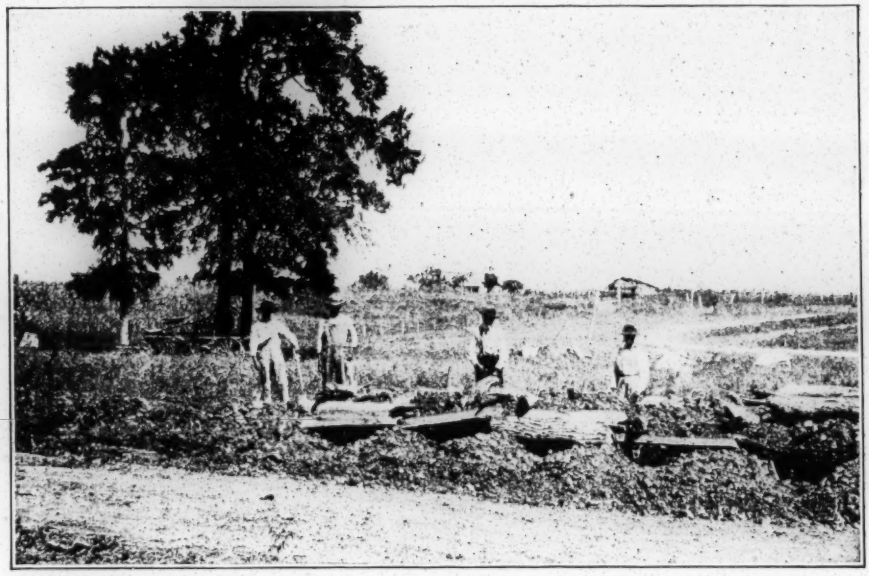
Of the immense territory of Russia, the wheat belt occupies a comparatively small share. There is very little wheat grown beyond the southern and eastern parts of the famous black-soil region. Eight provinces in the south and southeast contain 70 per cent of the wheat acreage of all Russia, Caucasia has about 12½ per cent, and Siberia 6 per cent.

BURNING THE ROADS

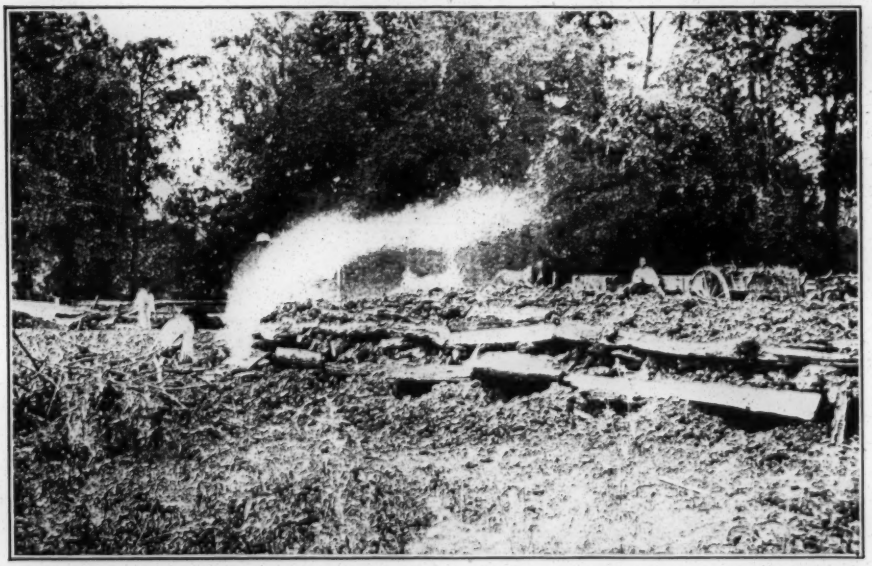
CONGRESS some time ago established an Office of Public Roads, which it instructed to conduct experiments and devise methods for improving the roads of the United States. The office has done a great deal to arouse interest throughout the country in the necessity of good roads, and has originated several means of making good roads economically. The latest discovery is that of burning clay roads in Mississippi.

In large areas in the South, particularly in the valleys of the Mississippi and its tributaries, sedimentary clays are found very generally. In these areas there is little or no sand, and the clays are of a particularly plastic and sticky variety. These sticky clays are locally known as "gumbo" and "buckshot." In such localities traffic is absolutely impossible during the wet season, as the wheels of heavy vehicles will sink to the hub.

The clay is black, owing to the high percentage of organic or vegetable matter it contains. It is particularly sticky in its nature and is almost wholly free from sand and grit. After it has been burned, however, the plasticity is entirely destroyed, and a light clinker is formed, which, though not particularly hard, when pulverized forms a smooth surface and seems to wear well. It should be understood that not all of the clay out of



First and Second Courses of Wood Covered with Lump Clay



Pile of Wood and Clay Completed and Firing Begun in One of the Flues

Burning the Roads, Clarksdale Mississippi.—After the road has been ploughed as deep as a four-horse team can drag the plough, the clay is heaped in furrows and then pieces of wood laid across the ridges. Alternate layers of clay and wood are built on this foundation. Photos from Office of Public Roads.

One Section of Road Burned and a Second Section Being Fired

Partial View of Finished Road

Burning the Roads, Clarksdale, Mississippi.—The burned clay, when rolled down and compacted, forms a road surface of from 6 to 8 inches in thickness. If properly burned, the material should be entirely changed in character, and when it is wet it should have no tendency to form mud. Photos from Office of Public Roads.

which the road is to be constructed is to be clinkered, but only a sufficient amount should be rendered non-plastic to neutralize the too sticky character of the native clay. Fortunately the gumbo district is plentifully covered with heavy timber, thus affording an abundance of fuel.

While the only experimental burnt-clay road constructed by the office was in Mississippi, the same methods might be applied with equally good results in the sections of the prairie states that have no other material available for road building.

It is, of course, impossible to give the cost of a burnt-clay road which will apply to the same work in all sections of the country. The items of cost of the experimental road 300 feet long, as constructed at Clarksdale, Mississippi, are as follows:

30½ cords of wood at $1.30 per cord..	$39.65
20 loads of bark, chips, etc.....	6.00
Labor at $1.25 per day and teams at $3 per day	38.30
Total cost of 300 feet.....	83.95
Total cost per mile at this rate...	1,478.40

In view of the success of the experiments so far made and the comparative cheapness of this form of construction, it is hoped that the localities which have no hard material available will continue the experiments with burnt clay. Although it cannot be denied that the gumbo and buckshot clays of the South are particularly adapted for burning on account of the high percentage of organic matter which they contain, it is none the less probable that many of the surface clays and soils of the states farther north could be treated in the same way, and in fact any soil or clay which bricks or clinkers at a comparatively low temperature should be suitable for the work.

Since the experiment made by this office at Clarksdale, Mississippi, numerous sections of burnt-clay road have been built in that locality, and up to the present time only favorable reports regarding them have been received.

THE WORK ON THE ISTHMUS

IN spite of the rainy season, which extends from the end of April to the end of December, steady progress has been made in all branches of the work on the Isthmus during the past three months, or since Congress in June last decided definitely upon the type of canal. Until that decision was reached many lines of work were held in suspense. It was impossible, for example, to fix the location of dumps until it should be known what kind of canal was to be constructed. From the moment the decision was reached the chief engineer set the work in motion along all lines of activity, and the results achieved show very clearly in the statistics which he has since sent to the Commission at Washington in his monthly reports.

The amount of excavation in the Culebra Cut during August was about 245,000 cubic yards, which exceeded by 5,000 cubic yards all previous monthly records. The amount for September was about 289,000 cubic yards, or 50,000 greater than the largest previous record.

There was available at the end of August a total force of 46 steam shovels, of which 27 were at work in the canal prism, 2 outside of the prism, 4 on the Panama Railway, and the rest set up and ready for work in various places.

The double tracking of the Panama Railroad, which is of vital importance to the removal of spoil from the Cut, is going forward steadily. Of the 35 miles of additional track contemplated, about 15 miles have been completed and are ready for use, and about 10 miles more are ready for track laying and ballasting, or about 75 per cent completed.

The receiving and forwarding yards on both sides of the Cut, which are to serve as great clearing houses for trains of spoil from the Cut, are practically completed at Pedro Miguel and Las Cascadas, and the yard at La Boca is about 75 per cent completed.

The great difficulty with labor has been somewhat overcome by slight improvement in the quality of the work of

the Jamaican negro, but it is the conviction of the chief engineer that satisfactory work can never be obtained from this class of laborers. The Commission has advertised for bids on a contract which it has put forth for Chinese laborers, and in response it is understood that several offers have been received, one or two of which may prove to be satisfactory. These are now under consideration, but as there are many questions of large importance involved, including international relations, the contracts, together with the bids, are now under examination by the Law Department of the government and by the State Department.

The Commission has also advertised for bids for doing the work of construction by private contract. Its proposal, in brief, is that the government shall supply all material and retain control of the hospital department, government and police departments, quarters and commissary, construction and maintenance of buildings, and the operation of the Panama Railroad. The contractor is to be paid a percentage of the cost of the work done, and this percentage will be a basis of competition between bidders. In other words, the government would employ the contractor as its agent to do the work, it supplying all the money and materials and he receiving his compensation through a percentage of the money expended. The Commission is confident that it will receive many offers from the leading contractors of this country and abroad to do the work in this manner.

SOUTH AMERICAN IMMIGRATION

MR JOSEPH W. J. LEE, Minister to Ecuador, reports that the government of Ecuador recently signed a contract with an agency in Guayaquil for the purpose of importing immigrants into the lower and eastern portion of the republic. The minister writes:

The company is to be called "The Ecuadorian Immigration Company," and binds itself to import 5,000 families. It is specified in the contract that the immigrants shall be white and preferably of the German or Dutch races. The company is to receive 500,000 hectares of land, but no land which interferes with the construction of the Curaray Railway. All necessities of life shall be entered free of duty, and also all animals, implements, seeds, etc., which the colonists bring with them. The company may sell land in the proportion of 50 hectares to each family. The price shall be adjusted according to the company's expenditures in the delivery of the immigrants. For ten years the government will exact no taxes from the colonists.

The land in question lies low on the eastern slope of the Andes, and transportation therefrom can be accomplished by means of various tributaries which eventually flow into the Amazon. The territory is said to be very rich in rubber and dyewoods, but not particularly healthful for Europeans.

NOTE ON GLACIER DISCOVERY

DETROIT, MICH., *July* 11, 1906.

To the Editor National Geographic Magazine, Washington, D. C.

DEAR SIR: In a recent number (April) of the NATIONAL GEOGRAPHIC MAGAZINE there is a letter by Mr C. A. Taintor, of New York, in which claim is made for original discovery of glaciers on the eastern face of Fremonts Peak. This is based on failure to find that the U. S. Geological Survey, or any one else, had ever visited the locality, save his party.

In Vol. I of the Annual Report of the U. S. Geological Survey for 1878, and on p. XVI of Dr Hayden's introductory letter mention is made of the ascent of the peak by Mr Wilson's triangulation party, and of the existence of these glaciers. The writer was one, among several others, who ascended the mountain at the same time and made a series of negatives showing the entire extent of the glacial field. Mr W. H. Holmes also made a panoramic drawing which accompanied the report.

Yours very truly,

W. H. JACKSON.

THE ORIGIN OF "LABRADOR"

Referring to the meaning of Labrador given in the June number of the NATIONAL GEOGRAPHIC MAGAZINE, I send the following note:

The name *Labrador* was originally given to Greenland by the Cabots, who in 1498 made a voyage from Bristol (England), and in the

course of their sailings came upon the coast of Greenland. Cabot, visiting in Lisbon previous to leaving on this 1498 voyage, met there a certain Joàs Fernandes, llavrador (or land-owner, as we would now translate the word), who had gone in 1492 on a voyage of exploration and had seen land, a description of which he gave to Cabot.

Fernandes returned with Cabot to Bristol and discoursed with its merchants about the land he had seen. On the voyage out he no doubt talked often with the sailors about the land they would surely see. When, therefore, those on board Cabot's vessel saw the land they recognized it at once and cried out, "The Labrador's land," and so it was marked down on the ship's chart.

Later on the whole land from Newfoundland northward was marked Labrador on some maps,* the Straits of Davis, separating Greenland from Ungava, having been deemed to be a gulf and the Straits of Belleisle being then thought a mere indentation of the coast line. When it was found that the coast Cabot called Labrador was really Greenland and was separated entirely from this continent, and, further, that Newfoundland was an island, the mapmakers gave both lands their present designations and confined the name *Labrador* to the central portion, its present bounds.

The above is the derivation given by H. P. Biggar, whose work on the Early Trading Companies of New France evidences the care and consideration which he has given to every point he discusses.

After testing every explanation of the derivation of the word, I came to the conclusion that Biggar's was the correct one, his long residence in Portugal giving him singular opportunities for investigation.

(DR) GEORGE JOHNSON,
Statistician.

GRAND PRE, N. S., *August* 14, 1906.

*Descelier's Mappe Monde (1546) gives the name La Terre du Labourière to Greenland and to the lands to the south, now known as Labrador.

EXECUTIVE ORDER

The official title of the United States Board on Geographic Names is changed to *United States Geographic Board.*

In addition to its present duties, advisory powers are hereby granted to this board concerning the preparation of maps compiled, or to be compiled, in the various bureaus and offices of the government, with a special view to the avoidance of unnecessary duplications of work; and for the unification and improvement of the scales of maps, of the symbols and conventions used upon them, and of the methods of representing relief. Hereafter all such projects as are of importance shall be submitted to this board for advice before being undertaken.

THEODORE ROOSEVELT.

THE WHITE HOUSE, *August* 10, 1906.

At a recent meeting of the Norwegian Geographical Society, in Christiania, the gold medal of the society was awarded to Dr Carl Lumholtz for his scientific explorations in Mexico and Australia.

Panama, The Isthmus and Canal. By C. H. Forbes-Lindsey. Pp. 368. 5 x 7½ inches. Illustrated with two attached maps. Philadelphia: The John C. Winston Co. 1906. $1.00.

The author of "India, Past and Present," "America's Insular Possessions," etc., has given in this volume the story of the great project from the earliest Spanish explorations to the present time. The history of the French Company is told and much information of the De Lesseps régime given. There are interesting chapters on the labor question and the sanitary and health problems, which are the most serious obstacles confronting our engineers today. The lock and sea-level controversy is taken up and plans and estimates of experts given, while many illustrations and several late maps and an appendix, entitled "Great Canals of the World," make the volume a valuable one. J. O. L.

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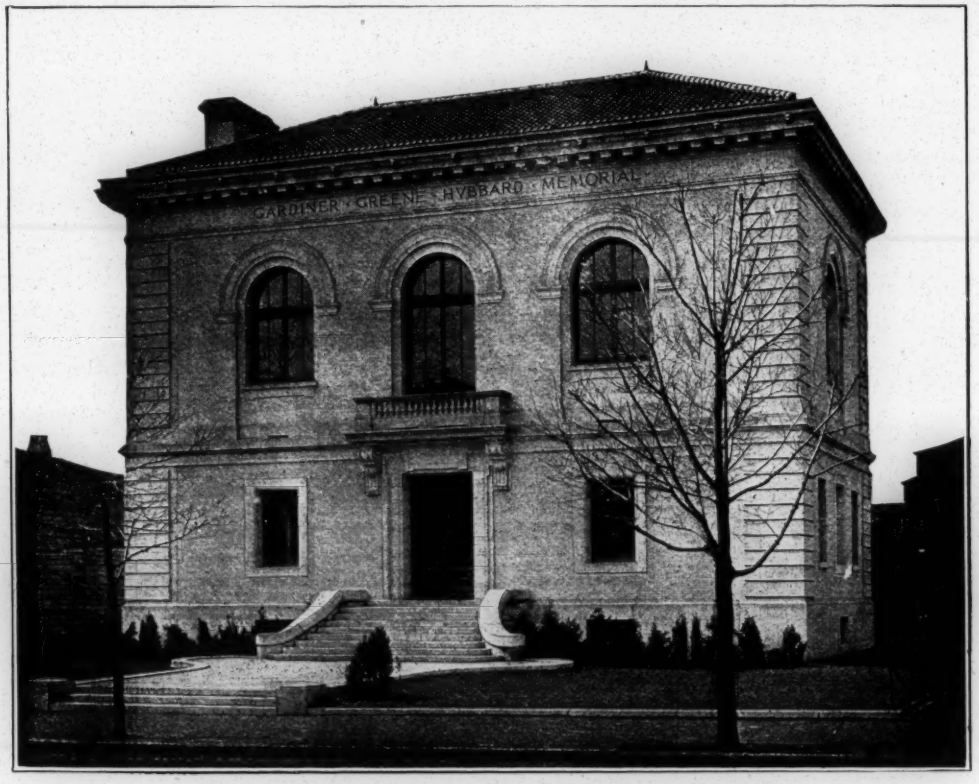

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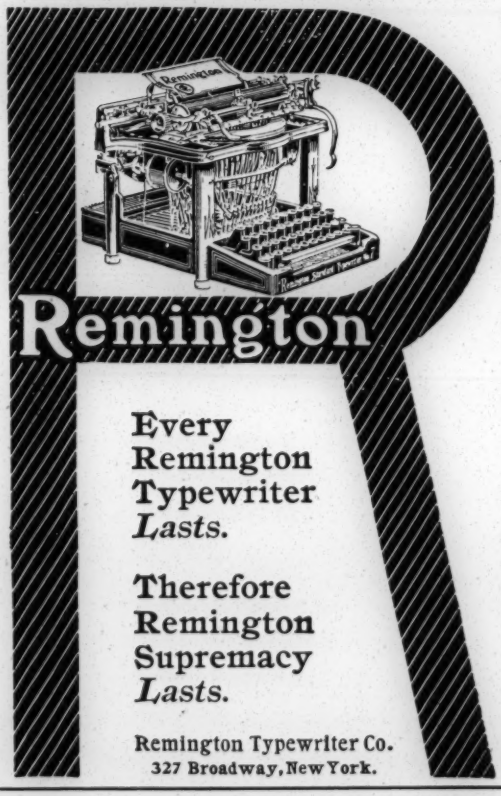

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